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**The Dissertation Committee for Sara Louise Tedford certifies that this is the  
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**Language Brokering among Latino Middle School Students: Relations with  
Academic Achievement, Self-Efficacy, and Acculturative Stress**

**Committee:**

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**Marie-Anne Suizzo, Supervisor**

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**Cindy Carlson**

---

**Timothy Keith**

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**Su Yeong Kim**

---

**Richard Valencia**

**Language Brokering among Latino Middle School Students: Relations with  
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by

**Sara Louise Tedford, B.A.; M.A.**

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## DEDICATION

This dissertation is dedicated to my parents, Jean and Bill Tedford, and to my brother, William Tedford. Your love and support have meant the world to me. Thank you for always believing in me and my dreams.

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**Language Brokering among Latino Middle School Students: Relations with  
Academic Achievement, Self-Efficacy, and Acculturative Stress**

Sara Louise Tedford, Ph.D.

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Supervisor: Marie-Anne Suizzo

Child language brokers frequently translate in adult-level situations. Research has suggested that through translating, brokers may develop advanced language, cognitive, and social skills (De Ment, Buriel, & Villanueva, 2005; McQuillan & Tse, 1995), and these may lead to greater academic achievement and self-efficacy (Buriel, Perez, De Ment, Chavez, & Moran, 1998). Additionally, language brokers have been found to increase in biculturalism as they translate for people of different cultures (Acoach & Webb, 2004; Buriel et al., 1998). Brokers might experience reduced acculturative stress, for which biculturalism has been found to be a protective factor (Bacallao & Smokowski, 2005). Despite its possible benefits, brokering has been associated with negative emotions and behavioral problems for some children (Chao, 2006; Weisskirch & Alva, 2002). The mixed results of language brokering studies may partially be related to the age of participants, with translating appearing to be a more positive experience for older adolescents (Orellana & Reynolds, 2008).

The purpose of this study was to test relations among language brokering, academic achievement, academic self-efficacy, social self-efficacy, and acculturative stress. I proposed and tested if language brokering was associated with more positive outcomes. In addition, I tested if older brokers had more positive outcomes than younger brokers.

Participants included 207 Latino middle school students, aged 10 to 14 years, who completed self-report surveys. Measures included a background demographics questionnaire and scales for language brokering, academic self-efficacy, social self-efficacy, and acculturative stress. Achievement was measured with grades from school records. Results were non-significant for the relation of language brokering with achievement and social self-efficacy when controlling for other predictor variables. In contrast to expectations, translating for more people was associated with decreased academic self-efficacy and greater acculturative stress. Further analysis revealed that language brokering for parents and grandparents was associated with greater acculturative stress, while translating for other people was not. Although translating was associated with more acculturative stress, and older children reported less acculturative stress, age was not found to moderate the relation of language brokering and acculturative stress. Limitations, implications, and suggestions for future directions in language brokering research and clinical work are presented.

## Table of Contents

Chapter 1: Introduction.....	1
Chapter 2: Review of the Literature.....	6
Latinos in the United States.....	6
Language Brokering.....	11
Language Brokering and Academic Achievement.....	14
Language Brokering and Academic Self-Efficacy.....	21
Language Brokering and Social Self-Efficacy.....	26
Connections among Language Brokering, Achievement, Academic Self-Efficacy, and Social Self-Efficacy.....	27
The Emotional and Relational Impact of Language Brokering.....	28
Language Brokering and Evidence for Age Effects.....	37
Statement of the Problem.....	39
Research Questions and Hypotheses.....	41
Chapter 3: Method.....	48
Procedure.....	48
Participants.....	51
Measures.....	53
Data Screening.....	59
Chapter 4: Results.....	61
Descriptive Statistics and Relations among Variables.....	61
Tests of Research Questions.....	70

Tests for Possible Interaction Effects.....	80
Chapter 5: Discussion .....	84
Major Findings and Integration with Previous Research.....	84
Limitations and Future Directions.....	100
Implications for Practice.....	104
Summary and Conclusions.....	105
Appendix A: Parent Consent and Child Assent Forms .....	108
Appendix B: Background Questionnaire.....	118
Appendix C: Language Brokering Scale.....	122
Appendix D: Academic Self-Efficacy Scale .....	126
Appendix E: Social Self-Efficacy Scale.....	128
Appendix F: Acculturative Stress Scale.....	134
References.....	140
Vita.....	156

## Chapter 1: Introduction

Language brokering is defined as “interpretation and translation between culturally and linguistically different parties” (Tse, 1995). Children who translate for their parents are called *language brokers* (Buriel et al., 1998; Tse, 1995). Rather than providing word-for-word translations, language brokers shape and interpret the content of the messages they convey (Tse, 1995). Brokering appears to be very common among children of immigrant parents, with prevalence estimates ranging from seventy to one hundred percent (Buriel et al., 1998; Chao, 2006; Tse, 1995; Weisskirch & Alva, 2002). Nevertheless, empirical research on brokering only began in the mid-1990’s, and little has been published in this line of research (Morales & Hanson, 2005).

Most language brokering studies have been conducted with Latino participants. The Latino population in the United States is growing and by 2008 was projected to be the largest racial or ethnic group other than Whites (U. S. Census Bureau, 2009). Latino children are 46% of the Texas population and 50% of the California population (The Annie E. Casey Foundation, 2009). As of 1999, twenty-five percent of Latino children spoke mostly Spanish at home (National Center for Education Statistics [NCES], 2003). These statistics indicate that a large portion of Texan and Californian schoolchildren likely engage in language brokering.

Language brokers engage in various translating tasks that require them to function in adult-level situations. For example, studies have found that child brokers interpret job applications, at doctor’s office visits, and at parent-teacher conferences (Orellana, Dorner, & Pulido, 2003; Tse, 1995). It has been argued that through experiences such as

these, brokers develop advanced problem-solving skills, which lead to improved cognitive ability (Dorner, Orellana, & Li-Grining, 2007). In addition, some propose that linguistic abilities should improve as brokering tasks frequently involve adult-level vocabulary (Buriel et al., 1998; Dorner et al., 2007). These improved linguistic and cognitive skills could be expected to lead to higher levels of academic achievement. Yet, only three studies have tested the relation between language brokering and academic success, and results have been inconclusive (Acoach & Webb, 2004; Buriel et al., 1998; Dorner et al., 2007).

Child brokers may also develop greater confidence in their academic abilities as a result of solving difficult problems. Researchers have investigated whether language brokering is associated with self-assessments of scholastic competence and with *academic self-efficacy*, which represents beliefs about the ability to apply academic skills. Again, only three studies have examined these relations, and findings were also inconsistent (Acoach & Webb, 2004; Buriel et al., 1998; Weisskirch & Alva, 2002). More research is needed to investigate whether theorized cognitive and linguistic gains lead to better academic outcomes among language brokers.

Language brokers report that they frequently mediate in transactions among adults, and studies have described how role-reversal occurs when parents of brokers come to depend on their children to make important family decisions (Ceballo, 2004; De Ment et al., 2005). These processes may result in greater feelings of maturity, power, and confidence in social situations. These effects have been supported by results from a study that found language brokering among a sample of high school students to be associated

with greater *social self-efficacy*, which refers to self-assurance in the ability to use social skills (Buriel et al., 1998). Additional research, especially with younger children, is needed to provide more evidence regarding the hypothesized relation between language brokering and improved social self-efficacy.

Despite the possible positive social and academic outcomes associated with brokering, studies also have shown that translating duties frequently upset children. Some brokers have reported that they disliked translating, were ambivalent about the benefits of brokering, and felt stress and a sense of burden due to their brokering responsibilities (McQuillan & Tse, 1995; Weisskirch & Alva, 2002). Weisskirch and Alva (2002) noted that stress associated with brokering may be compounded by the additional burden of negotiating conflicts between different cultural practices, called *acculturative stress*. They postulated that brokering would likely increase levels of acculturative stress; however, in their 2002 study which included measures of brokering and acculturative stress, they did not report whether a relation was found. No other studies have examined whether language brokering relates to acculturative stress.

A view that contrasts with the position of Weisskirch and Alva (2002) is that brokers may actually experience reduced levels of acculturative stress because brokering helps them develop bicultural competencies. Berry (2003) argues that acculturative stress is lowest among those who use an integrative acculturative strategy where they foster relationships with people from the dominant group while maintaining a strong identity associated with the heritage culture. Language brokering presents the opportunity for children to use this type of bicultural strategy, and thus reduce acculturative stress, as

brokers are required to interact and develop relationships with people from both the dominant culture and the heritage culture. In fact, studies have found that language brokering is associated with increased levels of biculturalism (Acoach & Webb, 2004; Buriel et al., 1998), and biculturalism has been found to protect against acculturative stress (Bacallao & Smokowski, 2005).

There is some evidence that the benefits of language brokering develop over time. Most research finding positive outcomes for brokers has been conducted with adults and high school students who have more experience and language skills than do younger children to handle the pressure and responsibility involved in brokering. Some have speculated that younger brokers may not benefit as much from translating because they could feel nervous or conflicted about brokering (Weisskirch & Alva, 2002). The limited amount of research with different age groups suggests that language brokering has more beneficial effects for older children, with high school children experiencing less stress and more positive outcomes than younger children (Acoach & Webb, 2004; Buriel et al., 1998; Dorner, Orellana, & Jiménez, 2008).

In summary, although interest in language brokering research has been growing in recent years, with half of the studies in the area being conducted since 2005, little is known about possible effects on children. Results from studies of relations of brokering with academic and social outcomes have been inconclusive, and no one has examined the possible relation of brokering with acculturative stress. Descriptions of academic and social benefits for brokers have been described in retrospective studies with adults and college students (Ceballo, 2004; De Ment et al., 2005; McQuillan & Tse, 1995) and

tested with high school students (Acoach & Webb, 2004; Buriel et al., 1998) and fifth graders (Dorner et al., 2007). While studies with middle school students have examined self-efficacy felt while translating (Wu & Kim, 2009) and emotions associated with brokering (Weisskirch, 2007), only one study has tested academic and social outcomes among junior high school brokers (Acoach & Webb, 2004).

The current study adds to the existing knowledge of outcomes associated with language brokering among Latino middle school students. The purpose was to examine the relation of language brokering with academic achievement, academic self-efficacy, social self-efficacy, and acculturative stress. The study provides valuable additional information about how brokering relates to child outcomes and how effects may vary by age.

## **Chapter 2: Review of the Literature**

The purpose of this chapter is to provide a critical review of the literature relevant to language brokering and its relations to educational achievement, academic and social self-efficacy, and acculturative stress among Latinos. I begin with a description of the Latino population in the United States and the educational experiences of Latino schoolchildren. I discuss educational challenges for US Latinos and then describe factors associated with positive academic attainment. Then, I review the extant research on language brokering. I highlight studies and theoretical frameworks related to links among brokering and outcomes including academic achievement and self-efficacy. Next I discuss research regarding the emotional effects of brokering, including acculturative stress. Possible differential effects related to age are considered. Finally, I present the goals of the current study.

### **Latinos in the United States**

**Demographic information.** As of 2008, Latinos made up 15.4% of the United States population (U. S. Census Bureau, 2009) and were the second-largest racial or ethnic group after Whites. Estimates are probably artificially low due to the unknown numbers of undocumented immigrants from Latin America (Suárez -Orozco & Suárez -Orozco, 1995). There is great variability among Latinos, who represent diverse groups of people from Mexico, Central and South America and the Caribbean. The largest subsets of Latinos in the United States are of Mexican, Puerto Rican, Central American, and Cuban heritage. In Texas and California, three quarters of Latinos are Mexican or Mexican American (Social Science Data Analysis Network [SSDA], 2000a, 2000b).

The Latino population in the US faces relatively low social and economic circumstances. Latinos are almost three times as likely to live in poverty as compared to non-Latino Whites, who have the lowest poverty rate of any ethnic group. Census Bureau estimates from 2001 found a poverty rate of 21.4 percent for Latinos as compared to 7.8 percent for Whites, 22.7 percent for African Americans, and 10.2 percent for Asian and Pacific Islanders (US Census Bureau, 2002). Immigrant Latinos are especially likely to face economic disadvantage (Suárez -Orozco & Suárez -Orozco, 1995). High poverty rates among Latinos are likely sustained by lack of access to adequate educational opportunities. For example, Latinos have low levels of high school completion; among those 25 years and older, 57.0% of Latinos have obtained a high school degree as compared to 88.4% of Whites and 78.9% of African Americans (Perez, 2001). It has also been argued that, among other factors, discrimination and low quality instruction in schools contribute to low educational attainment among US Latinos (Valencia, 2002).

Latinos are the fastest-growing ethnic group in the United States (Perez, 2001). Historically, the number of Latinos has increased primarily due to immigration (Suro & Passel, 2003), and estimates indicate that currently 40% of US Latinos are immigrants (Ramirez & de la Cruz, 2003). In recent years, high birth rates have accounted for a greater percentage of Latino population growth, and this trend is expected to continue in the future (Suro & Passel, 2003). It follows that there will be increasing numbers of Latino children in US schools. As these children are more likely to be of relatively low socioeconomic status, and academic achievement is associated with socio-economic

status (Sirin, 2005), there will be a continuing and growing need to attend to the academic attainment of Latino schoolchildren.

**The experience of Latino schoolchildren.** The percentage of Latino students enrolled in public elementary and secondary schools is estimated at 17% for the United States, 41% for Texas, and 43% for California (NCES, 2003). Clearly, meeting the educational needs of Latinos is crucial for the success of public schools. Unfortunately, the system has failed to adequately educate this population as seen in the low school achievement of Latinos as compared to their peers. Data from the 1977 to 1999 National Assessment of Educational Progress reports found that Latino children consistently scored lower than Whites in tests of content areas, including reading, writing and science (Ochoa, 2003; NCES, 2003; Valencia, 2002). This pattern of lower achievement among Latinos is also seen in scores from the Texas Assessment of Academic Skills (TAAS) tests from 1994-2000 (Valencia, 2002). Fewer Latinos are recognized for high-level abilities, with disproportionately low numbers enrolled in Advanced Placement classes or gifted programs (Kloosterman, 2003; Valencia, 2002). Finally, dropout rates are strikingly higher among Latinos (28%) than among other ethnic groups (7% for Whites and 13% for African Americans) (NCES, 2003).

Researchers have also described a variety of school climate and external factors that contribute to difficulties in school performance among Latinos. These students are the most segregated group in US schools and are frequently unofficially segregated even in ethnically diverse schools due to academic tracking systems (Katz, 1999; Valencia, 2002). Valencia (2002) cites research that in Texas, inexperienced teachers are often

placed in schools in which the majority of students are not White, resulting in Latinos receiving lower-quality instruction than their White peers. Many Latinos also do not have the benefit of role models who share their ethnicity due to the low number of Latino teachers (Valencia, 2002). Many Latinos also have few economic resources and thus may feel pressured to work, taking time away from their studies (Suárez -Orozco & Suárez -Orozco, 1995). Additional stressors include racial discrimination (Valencia, 2002) and discouragement due to negative evaluations of opportunities as compared to peers (Suárez -Orozco & Suárez -Orozco, 1995).

Latino children who immigrate to the U. S. face special circumstances that distinguish them from their peers. Immigrant children often have poor English skills and are placed in English as a Second Language (ESL) classes. Some research indicates that these classes may create unofficial tracking systems by ethnicity and language that separate ESL students from the general school population, provide fewer opportunities for advanced-level learning, and result in feelings of isolation (Clemente & Collison, 2000; Katz, 1999; Norrid-Lacey & Spencer, 1999). At the same time, isolation inhibits their English-language acquisition, and immigrant children may be discriminated against by the school administration or other students for speaking Spanish (Galindo, 1995; Norrid-Lacey & Spencer, 1999). Undocumented immigrant children may feel especially discouraged as they realize their opportunities without legal status are limited (Norrid-Lacey & Spencer, 1999). Immigrant Latinos also face the stress of attempting to integrate into a new culture while maintaining their identities (Birman, 1998; Norrid-Lacey & Spencer, 1999).

While immigrant Latino youth face many challenges, there is some evidence that they may fare better than their non-immigrant Latino peers. There is some qualitative evidence that immigrant children demonstrate greater achievement motivation in school (Suárez -Orozco & Suárez -Orozco, 1995); however, few studies have examined generational differences in attitudes toward school and performance. Kao and Tienda (1995) found that first and second generation Latinos had greater educational aspirations than did later generations, although Latinos of all generations showed similar academic performance. In a study of ethnically-diverse adolescents from immigrant families, Fuligni (1997) found that first generation students earned higher grades in math and English classes than their third generation peers, regardless of ethnicity. Finally, data from the Children of Immigrants Longitudinal Study (CILS) indicated that Latino children of immigrants had much lower dropout rates than US-born Latinos (Rumbaut, 2000). The sample used for the analysis included both US-born and foreign-born children of immigrants, so behaviors of first and second generation students could not be compared. Further research is needed in this area to clarify the effects of generational status on academic achievement.

In light of the varied academic performance among Latinos, it is important to learn about factors that may benefit and harm these children. Language brokering research represents a lens through which to study both positive and negative experiences and outcomes among Latino schoolchildren. This area of study concerns children who translate for non-English speaking caregivers, which has been shown to be a very common practice among first- and second-generation Latino schoolchildren (Buriel et al.,

1998; Chao, 2006). This research is especially topical because it focuses upon specific processes that affect many Latino children academically, socially, and emotionally.

### **Language Brokering**

**Definition and description of brokering activities.** Language brokering is the practice of interpreting and translating between people who differ culturally and linguistically (Tse, 1995). Children in the United States who have non-English speaking parents often become language brokers. Studies that have reported levels of brokering among bilingual children of immigrant parents have found prevalence rates of from seventy to one hundred percent (Buriel et al., 1998; Chao, 2006, Shannon, 1990; Tse, 1995; Weisskirch & Alva, 2002). Child language brokers translate most often for parents but also for many others including siblings, extended family members, classmates, and friends of the family (McQuillan & Tse, 1995; Weisskirch, 2005; Weisskirch & Alva, 2002). Brokers translate more often for their mothers than for their fathers (Chao, 2006). Translating occurs in a variety of settings, including at home, school, and stores (Morales & Hanson, 2005). Things translated at home include phone calls, credit card and utility bills, and letters from school (Orellana, Dorner et al., 2003; Weisskirch & Alva, 2002). Brokers are also requested to translate many other types of things in public spaces such as labels on items at stores, forms in doctors' offices, and at parent-teacher conferences (Orellana, Dorner et. al, 2003; Weisskirch & Alva, 2002).

There is evidence that brokering begins at a young age and that immigrant children begin to broker soon after arrival to the United States. In a study with bilingual Latino high school students, all immigrant subjects began brokering within four years of

arriving in the United States, and all US-born subjects reported brokering by age 12 (Tse, 1995). The average age that children begin brokering has been reported in the literature at 10.4 years and 10.9 years (Buriel et al., 1998; Tse, 1995). Because Latinos represent the ethnic group with the largest number of bilinguals in the United States, the majority of language brokering research has been conducted with Latino youth.

What differentiates language brokering from simple translation? Language brokering relates to the concept of cultural brokering, developed by Wolf (1956). A cultural broker serves as an intermediary between two or more different cultures within a multicultural society. Gentemann and Whitehead (1983) assert “whereas a bilingual interpreter makes communication possible between speakers of different languages, the cultural broker makes interaction between the carriers of different cultures more effective” (p. 119). Language brokering can be seen as a specific type of cultural brokering, involving the use of translation to mediate and facilitate understanding. As Orellana, Reynolds, Dorner and Meza (2003) observe, brokering involves “mutual negotiation” in which the child and adult(s) co-construct meaning. While the child may have greater knowledge of English, the adult(s) often have more contextual knowledge (e.g., how a jury works); thus, the participants combine their resources to maximize understanding.

In contrast to formal translating, brokers’ developing translating skills, perceptions, and goals affect the involved parties’ understanding of the situation and subsequent decisions. Child language brokers do not merely translate speech verbatim, but often alter the messages they communicate to best serve their own interests or those

of the people for whom they translate (De Ment et al., 2005; Tse & McQuillan, 1996; Valdes, 2003). For example, one language broker recalled omitting information regarding a sibling's discipline problems while translating during a parent-teacher conference (De Ment et al., 2005). Brokers are also often required to explain cultural information, such as how the US school system works or explaining unfamiliar holidays (De Ment et al., 2005; Tse & McQuillan, 1996).

**Gender and language brokering.** Some studies have found that girls engage in language brokering for their parents more frequently than do boys (Buriel, Love, & De Ment, 2006; Chao, 2006; Valenzuela, 1999), while others have not found a gender difference in amount of language brokering (Acoach & Webb, 2004; Love & Buriel, 2007; Oznobishin & Krunam, 2009; Weisskirch & Alva, 2002). Valenzuela (1999), who found gender differences in translating, offers possible explanations for the gendered nature of language brokering. First, in Latino households, girls may be more willing to broker for their families because in exchange for their translating activities, their families reward them with increased responsibility and independence (comparable to their male siblings). Another possible explanation is that girls in Latino households assist more often in household-related responsibilities, which include brokering of texts or conversations within the home. Valenzuela (1999) found no gender pattern in amount of brokering that occurred outside the home, such as at school and in health settings. There is some evidence that girls experience more positive feelings and less stress related to brokering as compared to boys (Buriel et al., 2006; Love & Buriel, 2007).

**Birth order and brokering.** My study examined possible relations of birth order with language brokering. No published studies of language brokering have reported on birth order among their participants or tested how language brokering may be related to birth order. Some qualitative studies have suggested that language brokering is done mostly by the eldest child or elder children (Dorner et al., 2008; Valenzuela, 1999). The present study is the first to test for whether amount of brokering differs by birth order.

**Consequences of brokering.** Empirical research on children who broker began in the 1990's, and little is known regarding possible effects of brokering (Morales & Hanson, 2005). In a recent review of language brokering research, Morales and Hanson (2005) noted that there appear to be two contrasting views of the consequences of brokering for children. Some researchers have found that children did not enjoy brokering (Weisskirch & Alva, 2002) and that they feel overwhelmed and angered by brokering responsibilities (De Ment et al., 2005). In contrast, others have found that children benefit from translating activities as indicated by improvements in their self worth and language abilities (McQuillan & Tse, 1995; Tse, 1995). Some of the discrepancies in the findings on the consequences of brokering may be related to the age (Weisskirch & Alva, 2002) or gender (Buriel et al., 2006) of the broker. The following sections review the research on the effects of brokering related to academic outcomes, academic and social self-efficacy, and acculturative stress. Empirical findings are integrated with theoretical frameworks to illustrate children's experiences of brokering.

### **Language Brokering and Academic Achievement**

Qualitative and quantitative research with language brokers has raised the question of whether the activity of brokering may relate to children's academic achievement in school. Arguments have been made that performance may be enhanced due to increased opportunities for vocabulary and language development (De Ment et al., 2005; Tse, 1995), use of high-level cognitive skills (Tse, 1995), and exposure to adult-level situations that provide knowledge related to school achievement (Buriel et al., 1998). Given that there are multiple possible avenues for how brokering may relate to academic achievement, it is helpful to identify relevant theories in order to ground these possible links.

Theories of cognitive development have described processes through which children learn. Jean Piaget named four stages of cognitive development (Siegler, 1986). By approximately age seven, most children can understand symbols, including language, and have advanced to the third stage, the concrete operational period. During this time, they learn about others' points of views and attain logical thinking skills; however, they still lack abstract thinking skills. Around 11 or 12 years, children reach the final stage, the formal operational period, and are able to conceive of hypothetical possibilities as well as concrete reality.

According to Piaget, there are also three processes by which children develop cognitive abilities and advance to higher level stages: *assimilation*, *accommodation*, and *equilibration* (Siegler, 1986). Through assimilation, children adjust their understanding of incoming information to fit with their current ways of thinking. Accommodation occurs when children change their existing ideas to fit with new experiences. Most development

takes place through equilibration, in which children gain an increasingly accurate understanding of the world through the balance of these two processes (Siegler, 1986).

Another major cognitive theorist, Lev Semenovich Vygotsky, proposed that development occurs through children's social interactions (Vygotsky, 1978). Through the process of *internalization*, children turn their social experiences into internal processes. One of Vygotsky's key constructs in learning is the *zone of proximal development (ZPD)*, in which children learn with the assistance of adults or through interacting with peers. The ZPD refers to the distance between what children are able to do by themselves and what they can do with expert assistance. Thus, a child's potential level of development matters as much or more than his or her existing level of development.

Language brokering could be argued to advance cognitive development through processes described by both Piaget and Vygotsky. Brokering tasks place children in many situations that are outside their previous realms of experience, requiring them to seek equilibration; in this process they match their understandings of the unfamiliar tasks to prior knowledge and adjust these understandings as necessary. Research shows that children begin brokering around ten years (Buriel et al., 1998; Tse, 1995), when most are in the concrete operational period. These children may advance to the formal operational period more quickly than others as many brokering tasks appear to require abstract thinking skills. In one account, a child explained how she translated for her mother during a job interview and was aware of her role in her mother's chances to attain employment (Valdes, 2003). Thus it seems some brokering tasks call for an understanding of the possible implications of translating activities. The present study examined language

brokering among middle school students, ages 10 to 14. While early adolescents should be in the process of developing the cognitive skills to translate more effectively, they may not yet have gained the emotional maturity to handle the stress of brokering. From this perspective, it was difficult to predict how this age group would be affected by translating activities.

With regards to Vygotsky's theory, brokers likely also learn through the process of internalization because brokering tasks by definition involve social interaction. In these interactions, brokers work together with adults and could be said to be functioning within the ZPD. This occurs because brokers translate for adults in situations that are above their current level of functioning. To perform well, they must ask for explanations from adults and thereby advance in their understanding. For example, when translating a rental agreement, the broker's parent will have more knowledge about the responsibilities involved with renting and will provide the necessary scaffolding to ensure the broker understands the basic information relevant to the task. While different, both Piaget's and Vygotsky's cognitive theories offer explanations of potential mechanisms through which language brokering may contribute to children's cognitive development.

Research on bilingualism represents another relevant source of theory related to language brokering. Forty-two percent of Latino schoolchildren speak mostly Spanish or a combination of English and Spanish at home (NCES, 2003). While there is much discussion regarding the challenges facing bilingual students and debate about bilingual instruction (Bialystok, 2001), little has been written about possible positive effects of

bilingualism on achievement. Research has instead focused on the effects of bilingualism on cognitive abilities.

Investigations of the effects of bilingualism on cognitive functioning began in the 1920's (Diaz, 1983). Diaz (1983) described early research that claimed to provide evidence for negative effects of bilingualism on cognition; however, results proved unreliable due to methodological flaws. Later studies that controlled for socioeconomic status and degree of bilingualism have found support for a positive contribution of bilingualism on cognition. Bilinguals have shown greater abilities than monolinguals on tests of creativity as measured by fluency, flexibility and originality in thinking (Landry, 1974). Bilinguals' advantages over monolinguals were explained by the need to switch between languages, requiring flexibility and readiness to change (Landry, 1974). Young bilingual children have also demonstrated higher abilities than monolinguals on nonverbal tests of cognition (Hakuta, 1987). Perhaps bilinguals' cognitive flexibility (Landry, 1974) helps them with both verbal and non-verbal tasks; it has been speculated that there are links between verbal and nonverbal processes (Hakuta, 1987).

Other researchers have examined the relation between bilingualism and the understanding of language. In a classic study, Ianco-Worrall (1972) conducted experiments in South Africa with English unilingual, Afrikaans unilingual and English/Afrikaans bilingual children aged four to nine. The results of her experiments found that bilingual children in both a four- to six-year-old group and a seven- to nine-year-old group were more likely than their peers to recognize that word names are arbitrary and can be changed. She also found that within the younger group, bilinguals

were more likely than unilinguals to relate words based on semantic rather than phonetic similarity. Her results indicate that the bilingual children showed a greater understanding of language and its flexibility than did monolinguals.

Later researchers have further examined the understanding of language rules and language's abstract nature, known as *metalinguistic knowledge*. Their studies have found that bilinguals appear to develop metalinguistic knowledge earlier than do monolinguals (Galambos & Goldin-Meadow, 1990), and that highly bilingual children show more metalinguistic knowledge than do monolinguals or partial bilinguals (Cromdal, 1999). It has been argued that this knowledge develops because bilingual children must attend to the structure of language in order to distinguish between their two languages (Galambos & Goldin-Meadow, 1990). Obviously, language brokers must possess bilingual skills in order to translate for family members, and therefore may benefit from the cognitive gains associated with bilingualism. It has also been argued that through the process of brokering, these children increase their bilingual abilities (Tse & McQuillan, 1996).

In light of the many possible ways in which brokers may gain academic skills, researchers have studied academic performance among language brokers (Acoach & Webb, 2004; Buriel et al., 1998; Tse, 1995). Tse (1995) provided descriptive statistics on the GPAs of Latino language brokers, but without a comparison group the data are difficult to interpret. Studies examining whether increased amounts of brokering lead to higher levels of academic success have found mixed results. Acoach and Webb (2004) did not find direct connections for language brokering and self-reported GPA among a sample of junior and senior high school English-as-a-Second Language students;

however, brokering was indirectly connected to GPA through academic self-efficacy among the high school students and through biculturalism among the junior high students. In another study of Latina college students, Sy (2006) also did not find effects for language brokering and self-reported GPA. In contrast, Buriel and colleagues (1998) found positive correlations between language brokering and self-reported grades in a high school sample.

A more recent study by Dorner and colleagues (2007) differed from these previous studies in two major ways. First, the authors used standardized math and reading test scores obtained from official school records rather than self-reports. Second, rather than using a global measure of academic achievement, they used tests from two different academic domains thereby allowing for a comparison of performance in different academic areas. The results from their study of fifth grade Latinos found that among the most active language brokers, there was a significant relation between brokering and fifth grade reading scores. In addition, they found positive, yet non-significant, correlations between brokering and fifth grade math test scores. This study provides the strongest evidence that there may be academic benefits to brokering, as it used a longitudinal design to control for prior achievement and used an objective measure of achievement. Considering the lack of findings in some of the other studies listed above, however, my study sought to corroborate that brokering and achievement are correlated. My study adds to the understanding of this relation by looking at achievement among middle school brokers, an understudied age group for this research, and performance in different academic domains.

When studying achievement among language brokers, it is important to consider possible confounding effects of socioeconomic status. Only one study to date has controlled for possible effects of parental education on both language brokering and academic outcomes (Sy, 2006). Among a sample of female Latina college students, Sy (2006) found that parental education was negatively correlated with frequency of language brokering but not correlated with achievement. I expected a negative relation between parental education and level of language brokering, because more-educated parents may have stronger English-language skills and rely less upon their children to translate. Other research has shown a positive relation between parental education and child's academic achievement (Blair, Blair, & Madamba, 1999; Smith, Atkins, & Connell, 2003). Thus, an important area my study addressed was possible connections among parental education, language brokering, and younger children's academic performance.

### **Language Brokering and Academic Self-Efficacy**

Another area of interest among language brokering research has been possible effects on *academic self-efficacy*. Bandura (1986) defines perceived *self-efficacy* as “people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances” (p. 391). Self-efficacy does not refer to people's assessments of what skills they have, but rather to their confidence in being able to use those skills. Bandura (1986) distinguishes self-efficacy from the related constructs of *self-concept*, the overall view people have of themselves, and *self-esteem*, an evaluation of one's worth. Although some research uses these terms interchangeably,

self-efficacy theory purports that these concepts do not necessarily relate to each other (Bandura, 1986; Pajares, 1996). It is possible to believe it is likely one will succeed in performing a task without believing that the performance of that task increases one's worth.

Bandura (1986) describes four sources of self-efficacy: enactive attainments, vicarious experiences, verbal persuasion and physiological cues. Enactive attainments are successful or unsuccessful experiences that lead individuals to believe they are more or less likely to succeed in the future. Vicarious experiences provide information about one's ability to succeed based upon the observation of a person modeling a behavior successfully or unsuccessfully. In the third source of self-efficacy, people gain information about their ability to perform based on what others tell them about their abilities. Finally, people's beliefs about their abilities are affected by the state of physiological arousal they experience during the performance of a task. For example, people who experience their hearts beating faster and sweating while they take a test may lower their self-evaluations of their test abilities in reaction to their fear responses.

Acoach and Webb (2004) contend that language brokering provides opportunities to experience three of the four sources of self-efficacy as described by Bandura (1986). First, brokers gain mastery experiences, or enactive attainments, when they successfully handle bicultural transactions. Second, the observation of other brokers gives them vicarious experience. For example, when a broker observes another child translating effectively for a third party, the first child sees the possibility of a successful brokering transaction. A third source of self-efficacy, verbal persuasion, occurs when someone

requests a broker's translation assistance. According to Bandura (1986), self-efficacy assessments develop over time, and new skills acquired during adolescence concern learning "the ways of adult society" (p. 417). Child language brokers may experience this developmental shift earlier than others by taking on adult decision-making duties such as enrolling siblings in school and reading and translating school information (De Ment et al., 2005; McQuillan & Tse, 1995). Children may even play important roles in contributing to the well-being of their families when they translate for parents during job interviews or interactions with government agencies (Valdes, 2003). These adults' dependence upon children in some ways gives children adult-level authority (De Ment et al., 2005; McQuillan & Tse, 1995; Tse & McQuillan, 1996; Weisskirch & Alva, 2002).

Relations between self-efficacy and performance have been supported by experimental research. In a study in which adult subjects with chronic snake phobias were trained to perform increasingly threatening approach tasks with snakes, Bandura and Adams (1977) found that self-efficacy judgments better predicted success on approach tasks following training than did past behavior on the tasks. Two additional studies with samples of adult snake phobics (Bandura, Adams, & Beyer, 1977) and graduate business students (Bandura & Jourden, 1991) found that mastery experiences with behavioral approach tasks (Bandura et al., 1977) and simulated managerial tasks (Bandura & Jourden, 1991) enhanced later performance on these tasks through positive effects on self-efficacy. It is believed that enhanced self-efficacy improves performance behavior by increasing the degree and persistence of effort (Bandura et al., 1977) and by raising performance goals (Bandura & Jourden, 1991). Studies have also examined the

relative effects of self-efficacy and *outcome expectancies*, which refer to beliefs that certain actions will lead to specific outcomes. Several studies found that in adult samples, self-efficacy predicted performance better than did outcome expectancies (Barling & Abel, 1983; Godding & Glasgow, 1985; Lee, 1984; Manning & Wright, 1983). In other words, performance is improved more when people believe they have a high ability to utilize a skill than when they have the general belief that learning or improving a particular skill leads to better task-performance. Thus, if mastery experiences with translating successes lead to language brokers' having higher levels of confidence in their abilities, their subsequent performance on related tasks may be improved.

Self-efficacy judgments vary according to the category of functioning one assesses. *Academic self-efficacy* concerns evaluations of the ability to successfully learn different academic subject matter (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996). Academic self-efficacy has been shown to enhance academic performance, both directly and through its effects on academic aspirations and goal-setting (Bandura et al., 1996; Zimmerman & Bandura, 1994; Zimmerman, Bandura, & Martinez-Pons, 1992). Multon, Brown, and Lent (1991) conducted a meta-analysis of 36 studies with participants who were mostly elementary school children (60.6%) and college students (28.9%). Multon and colleagues' (1991) analysis found wide support for the effects of self-efficacy, with approximately 14% of the variance in academic achievement explained by self-efficacy beliefs. It should be noted that their meta-analysis found significant variation among estimates of effect sizes, and it did not specify the types of self-efficacy beliefs used in the studies.

Little is known about academic self-efficacy among Latinos. In a study of academic resiliency, Waxman, Huang, and Padron (1997) found that Latino middle school students who earned high grades reported greater *self-concepts* than low-achieving students, but the researchers did not investigate the self-efficacy construct. Language brokering research offers a path by which to study academic self-efficacy among Latinos.

Brokering may contribute to academic self-efficacy by giving children success with problem-solving and situations requiring advanced cognitive and linguistic abilities (Buriel et al., 1998; McQuillan & Tse, 1995; Shannon, 1990; Tse, 1995). When children are required to explain rental agreements or interpret tax forms, they engage in thinking at a level usually reserved for adults. In retrospective studies, adult language brokers have claimed that brokering increased their academic performance, improved their English skills, and enhanced their understanding of the world (De Ment et al., 2005; McQuillan & Tse, 1995; Tse, 1995). Two studies have tested the relation between language brokering and academic self-efficacy, with inconclusive results. Acoach and Webb (2004) found a correlation between language brokering and academic self-efficacy in a high school sample but not with a junior high school sample. Buriel and colleagues (1998) did not find significant correlations between language brokering and academic self-efficacy in a study with high school students. A third study with fifth-grade language brokers found no relation between brokering and a concept related to academic self-efficacy, “scholastic competence” (Weisskirch & Alva, 2002). In summary, while retrospective studies with adults have indicated that language brokering may improve academic self-efficacy, studies with children that have tested this relation have found inconclusive results. It is

possible that child brokers do not yet have the experience and perspective to recognize the connection between the skills they are gaining through brokering tasks and the ability to perform academically. My study used a sample of middle school students which provided information about how brokering relates to academic self-efficacy within this age group.

### **Language Brokering and Social Self-Efficacy**

Another domain in which language brokering researchers have expressed interest is social competence and social self-efficacy. *Social self-efficacy* refers to the beliefs in one's abilities to create and sustain social relationships and handle social conflict (Bandura et al., 1996). Social development theory is helpful to understand how children's social skills dynamically relate to age and developmental level.

Erik Erikson's theory of social development describes the process by which children develop identities (Muuss, 1996). Erikson identified eight distinct stages across the lifespan, each of which requires specific attainments. Most children enter the "industry versus inferiority" stage during late childhood and begin to take pride in learning skills and in their accomplishments. The next stage, "identity versus identity confusion", usually begins during adolescence and requires the development of a personal identity. Peers replace parents as the most important influences during adolescence, but youth must ultimately separate themselves from peers to attain a unique and mature identity.

Through the lens of Erikson's theory, brokering tasks may create both opportunities for and challenges to social development. As brokers begin translating,

usually in late childhood, they may alternately feel pride in their successes and frustration over times when their language skills were inadequate to perform a translating task well. In adolescence, brokers may be required to spend relatively more time with parents than do their peers, possibly delaying differentiation. In contrast, brokering activities may help adolescents develop a unique identity related to their translating skills. In support of this concept, Weisskirch (2005) found that feelings about brokering positively related to ethnic identity among early adolescents.

Researchers have considered how translating for family members may affect children's developing social competencies. In retrospective studies, brokers reported that translating for their parents and other adults increased their feelings of maturity, independence, and power (De Ment et al., 2005; McQuillan & Tse, 1995; Tse, 1995). Based on these assertions and the implications of Erikson's theory of social development, language brokers could be expected to have advanced social abilities and higher perceived social efficacy. Only one study has tested the relation between language brokering and social self-efficacy (Buriel et al., 1998). While Buriel and colleagues (1998) found significant positive correlations, another study of language brokering and perceived social acceptance, a concept related to social self-efficacy, did not find significant effects (Weisskirch & Alva, 2002). Participants in my study were younger than the children in Buriel and colleague's (1998) study, and thus my study sheds light on whether brokering and social self-efficacy are related in younger populations.

### **Connections among Language Brokering, Achievement, Academic Self-Efficacy and Social Self-Efficacy**

Thus far, the discussion has focused upon relations of language brokering with achievement and self-efficacy constructs. It should also be considered, however, that all of these areas may interrelate. Research shows some evidence for connections among social self-efficacy, academic achievement, and academic self-efficacy. Bandura and colleagues (1996) conducted a path analysis that revealed a link between children's (ages 11 to 14) academic self-efficacy and achievement both directly and through effects on aspirations and social behavior. Children who rated themselves as high in the ability to master different academic subject matter reported academic performance to be more important, and they also later received higher grades. Results also showed that children with greater social self-efficacy, as measured by self-ratings in the ability to utilize social skills, reported academic performance as more important and later received higher grades. The analyses showed that social self-efficacy enhanced achievement indirectly through increased academic aspirations. Another study examining self-efficacy among fifth graders also found that social self-efficacy predicted academic self-efficacy even after accounting for prior achievement (Patrick, Hicks, & Ryan, 1997). Studies with high school age Latino language brokers have found a correlation between academic and social self-efficacy (Buriel et al., 1998) and between academic self-efficacy and achievement (Acoach & Webb, 2004; Buriel et al., 1998).

### **The Emotional and Relational Impact of Language Brokering**

**Feelings, beliefs, thoughts and attitudes.** An important consideration of language brokering research regards the emotional impact on children. Studies have used both quantitative and qualitative methods of detecting how children feel about the

brokering process. In early attempts to understand and quantify the brokering experience from the child's perspective, studies employed surveys to measure these children's attitudes toward, and feelings related to, brokering activities. Tse (1995) was the first to quantitatively assess some of these views. Some of the questions she asked brokers were whether they disliked translating and whether translating resulted in feelings of pride, created a burden, caused them embarrassment, and caused them to become more independent and mature. Buriel and colleagues (1998) later created a language brokering scale in which one section was devoted to brokers' "feelings" about brokering. Adaptations of this scale have been used by later researchers to continue to explore this aspect of brokering (Weisskirch, 2005; Weisskirch & Alva, 2002). It should be noted that although these measures purport to measure brokers' *feelings*, these measures have actually included items measuring a mixture of constructs including feelings, beliefs, thoughts, and attitudes about brokering.

Findings from qualitative and quantitative methods have shown that brokers express both positive and negative feelings, beliefs, thoughts, and attitudes about their translation activities (Buriel et al., 2006; McQuillan & Tse, 1995; Valenzuela, 1999; Weisskirch & Alva, 2002). In addition to believing that brokering leads to maturity, competence, and independence (De Ment et al., 2005; McQuillan & Tse, 1995), language brokers have described feeling pride in, and enjoyment of, translating (Tse, 1995; Weisskirch, 2005). In contrast, other studies have found that some brokers disliked translating, were ambivalent about the benefits of brokering, and felt embarrassment,

anger, stress, and a sense of burden due to their brokering responsibilities (De Ment et al., 2005; McQuillan & Tse, 1995; Tse & McQuillan, 1996; Weisskirch & Alva, 2002).

Orellana, Dorner and colleagues (2003) argue that while some “specialized encounters” (p. 511) involving more dramatic and difficult translations, such as at the doctor’s office regarding an illness, create high stress for brokers, most brokering experiences are more neutral and part of everyday life. Umaña-Taylor (2003) in contrast, asserts that language brokering is a major stressor for children and their families due to role-reversal with parents that may lead to feelings of resentment. Recent research has addressed some of the possible negative outcomes associated with emotional stress and the disruption of family life that may be associated with language brokering.

**Internalizing and externalizing symptoms associated with brokering.** In light of the arguments and evidence that brokering may lead to high levels of stress, studies of psychological outcomes of brokering have examined its relation to depression and other internalizing and externalizing symptoms (Buriel et al., 2006; Chao, 2006). Buriel and colleagues found that, for high school boys, brokering in a greater variety of settings was associated with greater depression while there was no relation between brokering and depression for high school girls. In a comparative study of Korean, Chinese, and Mexican descent high school students, Chao (2006) did not find relations among brokering and internalizing or externalizing symptoms for the Mexican descent students. In contrast, higher amounts of brokering were associated with greater frequencies of internalizing symptoms for the Chinese adolescents and both greater numbers of internalizing and externalizing symptoms for the Korean adolescents. Thus, it appears language brokering

does not generally result in levels of stress high enough to cause internalizing or externalizing symptoms among Mexican descent youth; however, there may be cultural differences that could be explored further.

**Parent-child relationships and family stress.** Other researchers have argued that brokering activities may damage the parent-child relationship (Baptiste, 1993; Cohen, Moran-Ellis, & Smaje, 1999; Umaña-Taylor, 2003). When parents must rely on their children to perform important transactions, this role-reversal within the family may cause parents to become resentful and all may feel uncomfortable (Baptiste, 1993). Children may be seen as being disrespectful by speaking about private adult matters. Cohen and colleagues (1999) found that children frequently translate potentially embarrassing medical information for their parents at doctors' offices. The authors argued that this shift in the normal balance of information shared with children could result in a decrease in parental authority at home.

Little research has been conducted to test relations between brokering and parent-child relationships. Buriel and colleagues (2006) did not find relations among frequency or type of language brokering activities and parent-child bonding for high school boys or girls. In contrast, the brokers' feelings about translating activities were related to parent-child bonding for both boys and girls; those who enjoyed brokering and had more positive attitudes about translating had stronger parent-child bonds. Similarly, Weisskirch (2007) found that strong negative feelings about language brokering were associated with more problematic family relationships.

It appears cultural factors may moderate the relation between translation and parent-child relationships. In a study of high school students, Chao (2006) found that increased frequency of translating was associated with *higher* respect for parents among Mexican descent adolescents. Among Chinese descent students, this relation was found only in translating for mothers and among Korean descent students, the relation of greater amounts of brokering to higher levels of parental respect was found just in translating for fathers. A study of Chinese descent adolescents found that a strong sense of Chinese identity led to greater feelings of family obligation and mattering to parents, which in turn led to a sense of increased self-efficacy while translating (Wu & Kim, 2009). In contrast, the adolescents with a low sense of Chinese identity felt more alienated from family and felt more burden associated with translating (Wu & Kim, 2009). Thus, it seems that, with variations among cultures, language brokering may affect how children feel about their families, and that family relationships may affect how children feel about translating.

**Acculturative stress.** When considering possible stress incurred by young Latinos through the language brokering process, it should be remembered that these brokers not only translate words but interpret cultural information. In other words, they act as both linguistic and cultural mediators for the parties involved in the brokering transaction. As language brokering necessitates understanding and negotiation between cultures, it represents one means by which these children acculturate.

*Acculturation* refers to process of change that occurs among cultural groups and individuals when two or more distinct cultural groups come into contact with one another

(Berry, 2003). It should be noted that two major types of acculturation models, unidimensional and bidimensional, have been proposed. Unidimensional models suppose a linear path of increasing adoption of dominant culture values and norms. Unidimensional models assume that as acculturated individuals increase their exposure to and adherence to the dominant culture, they simultaneously lose contact with and adherence to the culture of origin (Cabassa, 2003). This approach fails to recognize the ability of individuals to adopt aspects of the new culture while maintaining a strong connection with their culture of origin. Thus, a bidimensional model of acculturation, as described by Berry (2003), seems more accurate and useful.

Berry's (2003) conceptualization of acculturation assumes that bi-directional change occurs, in which the different cultures and their members affect one another. According to this model, acculturation within individuals, referred to as *psychological acculturation* (Graves, 1967), occurs along two dimensions: "maintenance of culture and identity" and "relations sought among groups". Thus, four possible acculturation "strategies" are possible. First, a person may choose *assimilation*, in which dominant culture practices and attitudes are adopted while those of the original culture are abandoned. At the opposite extreme, the strategy of *separation* involves maintaining the original culture and avoiding contact and involvement with the dominant culture. Another strategy, *marginalization*, occurs when individuals lack interest in maintaining their culture of origin while also not adopting the values of or having much contact with the dominant culture. Finally, others choose *integration*, in which they seek high levels of contact and involvement with the dominant culture while also maintaining original

cultural values and behaviors. Berry (2003) asserts that the strategy of integration is associated with the least acculturative stress.

Acculturative stress occurs as individuals come into contact with attitudes and behaviors that are different from those of the culture of origin. Born (1970) coined the term *acculturative stress* to capture the experience of feeling conflicted between the values of the culture of origin and the dominant culture. It has also been recognized that acculturative stress involves feelings of pressure to adapt to the dominant culture to avoid discrimination (Mena, Padilla, & Maldonado, 1987). Researchers interested in the psychological impact of stress resulting from acculturation have considered numerous possible negative outcomes. Williams and Berry (1991) stated that results of stress brought on through the process of acculturation include “anxiety, depression, feelings of marginality and alienation, heightened psychosomatic symptoms, and identity confusion” (p. 634).

Given the proliferation of studies regarding possible effects of acculturation on psychological adaptation, attempts have been made to integrate findings. In a review of the literature on acculturation and mental health, Rogler, Cortes, and Malgady (1991) noted that convergence in this area is difficult to identify due to methodological flaws and inconsistencies. One of the biggest methodological problems they identify is that many of the measures used to assess acculturation used a unidimensional rather than bidimensional model, which precludes finding evidence of the effects of true biculturalism. Findings from the review were split almost evenly between those studies that found positive and negative relations of acculturation with mental health difficulties.

In a more recent review of acculturation styles and psychological outcomes, Bacallao and Smokowski (2005) found that assimilation presented a risk factor for substance abuse among Latinos. In contrast, biculturalism was found to be a protective factor with regards to academic achievement, depression, and acculturative stress. This finding lends support to Berry's (2003) assertion that integrative strategies of acculturation reduce acculturative stress.

Another body of research has examined outcomes related specifically to stress caused by acculturation rather than "level" of acculturation or type of acculturation strategy. These studies have used measures of acculturative stress to more directly assess possible negative effects of acculturation on psychological and social outcomes. Measures of acculturative stress have conceptualized this construct as a combination of social stressors, stress associated with the process of acculturation (such as communication difficulties), and stress caused by perceived discrimination (Chavez, Moran, Reid, & Lopez, 1997; Mena, et al., 1987).

Most research regarding acculturative stress among Latinos in the US has been conducted with adults. Studies with Latino adults have found that acculturative stress predicts higher levels of anxiety and depression (Hovey, 2000; Hovey & Magaña, 2002; Salgado de Snyder, 1987) as well as higher general psychological distress (Rodriguez, Myers, Morris, & Cardoza, 2000; Thoman & Surís, 2004). Other variables have been found to predict greater amounts of acculturative stress among Latino adults; these variables include family conflict, feeling marginalized from family, neuroticism, disengagement from family, and having few coping resources (Castillo, Cano, Chen,

Blucker, & Olds, 2008; Mangold, Veraza, Kinkler, & Kinney, 2007; Miranda & Matheny, 2000). It has also been found that for women, high acculturative stress combined with poor family functioning predicted significantly more symptoms of depression than low acculturative stress paired with poor family functioning (Sarmiento & Cardemil, 2009). Finally, in a sample of female college students, those with both high levels of pride in their ethnicity and high acculturative stress had more depressive symptoms while those with high levels of pride in their ethnicity but low acculturative stress did not show increased depressive symptoms (Iturbide, Raffaelli, & Carlo, 2009).

The research on acculturative stress among Latino children is much less developed than acculturative stress research with Latino adults. A study of early adolescent Latinos found that grades and acculturative stress were negatively correlated (Schwartz, Zamboanga, & Jarvis, 2007), while another study of pre-adolescent Latinos did not find an association between acculturative stress and academic achievement (Hawley, Chavez, & St. Romain, 2007). Acculturative stress among adolescent Latinos has been associated with depression (Hovey & King, 1996), lower respect for family (Gil, Wagner, & Vega, 2000), and lower self-esteem (Gil, Vega, & Dimas, 1994). In addition, acculturative stress predicted anxiety when controlling for gender and socio-economic status in a sample of pre-adolescent Latinos of mostly Cuban-American descent (Suarez-Morales & Lopez, 2009). It appears that acculturative stress predicts a wide variety of poor psychological outcomes, and it seems that poor psychological functioning predicts acculturative stress, at least among adult Latinos. The results of these studies also suggest that difficult relationships with family lead to greater acculturative stress and may

mediate the relations between acculturative stress and psychological outcomes. Finally, acculturative stress may be associated with poor academic achievement among Latino children.

One study to date has examined acculturative stress among language brokers. Weisskirch and Alva (2002) found that, in a sample of Latino fifth-graders, boys reported higher levels of acculturative stress than did girls, and that there was a positive relation between acculturative stress and social acceptance. The authors did not report results relating to the amount of brokering and degree of acculturative stress. Thus, very little is known about the experience of acculturative stress among language brokers. It is interesting to examine relations between brokering and acculturative stress because brokering represents a specific process by which acculturation occurs. In addition, language brokers are in a position to acquire bicultural competencies through their translation activities, indicating they may gain some protection offered by biculturalism.

### **Language Brokering and Evidence for Age Effects**

Research suggests that the effects of language brokering vary by age. Most studies on language brokering have been conducted with high school or college students, whose experiences of brokering may be very different from those of younger brokers, as has been suggested by Weisskirch and Alva (2002). Studies with high school students have found benefits of brokering for academic self-efficacy (Acoach & Webb, 2004) and social self-efficacy (Buriel et al., 1998), and that brokers enjoyed and felt pride in brokering (Tse, 1995). In a retrospective qualitative study with college students, De Ment and colleagues (2005) found that brokers reported feelings of enhanced academic and

social self-efficacy. In contrast, most findings from studies with fifth-graders and junior high school students have not been as positive. In a junior high sample, language brokering was not associated with academic self-efficacy (Acoach & Webb, 2004). In another study of fifth grade brokers, Weisskirch and Alva (2002) found that brokers generally disliked translating and did not consider brokering to be helpful to them. Dorner and colleagues (2008), in a longitudinal study, also found that elementary school age brokers reported feeling nervous about translating and had gained confidence in translating by the time they reached high school. One study of younger brokers has found positive relations among high levels of brokering and reading test scores in a sample of fifth-grade Latinos (Dorner et al., 2007). Overall, however, it appears that younger brokers at least have more negative beliefs and feelings about brokering.

Weisskirch (2005) has speculated that “age, immaturity, and undeveloped cognitive and coping skills may contribute to younger children experiencing more conflict in language brokering” (p. 289). Although brokering activities may speed cognitive development and perhaps aid academic achievement, brokering could create a sense of burden as well. Some benefits of brokering may not develop until late adolescence, when children have the maturity to reflect upon how translating relates to other aspects of their lives. Additional studies, especially using longitudinal methodologies, would be informative about possible developmental aspects of brokering and would provide evidence of how the nature of brokering may change as children grow older. My study’s sample was a middle school population and therefore sheds light on outcomes associated with brokering for young adolescents.

## **Statement of the Problem**

Latinos are the fastest-growing immigrant group in the United States, and significant numbers of Latino schoolchildren speak mostly or some Spanish at home. Many parents may choose to speak Spanish with their children due to a lack of English language skills. Most non-English speaking parents are immigrants and come to rely upon their children, who learn English at school and in the community, to translate for them. This act of cultural and linguistic interpretation is called language brokering, and has been theorized to provide children with opportunities to utilize high-level cognitive, linguistic, and social abilities. At the same time, some language brokers have reported feeling burdened and overwhelmed by brokering responsibilities.

Studies on language brokering have examined whether brokering contributes to increased academic achievement and feelings of academic and social self-efficacy. Results have been inconsistent, with effects appearing to vary by age (Acoach & Webb, 2004; Buriel et al., 1998; Dorner et al., 2007; Weisskirch & Alva, 2002). Research has also examined brokers' attitudes and feelings about brokering (Buriel et al., 1998; Weisskirch & Alva, 2002), and one study has measured levels of brokers' acculturative stress (Weisskirch & Alva, 2002). More research is needed to understand the impact of language brokering on these domains and to investigate possible varying effects related to age. Although much research with Latinos has focused on poor educational outcomes, the study of language brokers offers insight into potential protective factors for this population.

My study adds to the literature on language brokering by examining its effects on Latino students' academic achievement, academic and social self-efficacy, and levels of acculturative stress. My study also sought to verify the high prevalence of language brokering among bilingual Latino children. The participants were middle school students; only one study of language brokering to date has studied academic outcomes with a similar age group (Acoach & Webb, 2004), and no one has examined social self-efficacy or acculturative stress with young adolescent brokers. Therefore, early adolescence is an important age to study to illustrate how the effects of language brokering may differ according to children's developmental level. The conceptual model of the relations among the constructs used in my study was as follows:

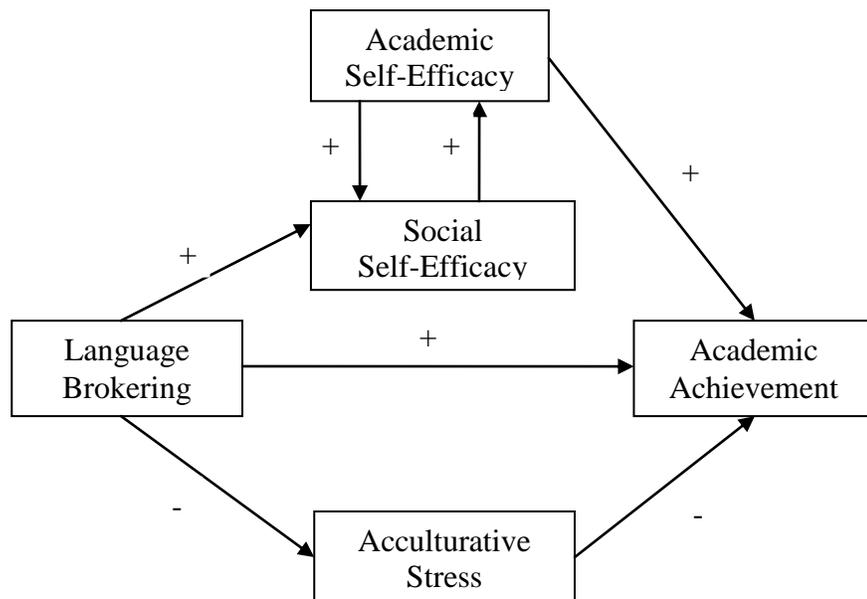


Figure 1: Conceptual Model

## **Research Questions and Hypotheses**

**Research question 1.** Is there a relation between language brokering and academic achievement, controlling for parental education, academic self-efficacy, and years the child has lived in the US?

**Hypothesis 1a.** I hypothesized that there was a positive relation between language brokering and academic achievement among middle school Latino students. In other words, those who translated more would have higher achievement compared to those who translated less.

**Rationale.** One study of high school language brokers found a positive relation of brokering to self-reported grades (Buriel et al., 1998). A second study did not find direct relations between total amounts of brokering and GPA among junior and senior high school students (Acoach & Webb, 2004); however, indirect relations were found for a high school sample through academic self-efficacy and for a junior high sample through biculturalism. A third study with fifth-grade students found an association between high levels of language brokering and reading test scores (Dorner, et al., 2007). Based upon these study results and language brokering theories that purport that brokering increases cognitive abilities and language skills, I expected that participants in my study who engaged in greater amounts of brokering would have higher grades. The analysis controlled for academic self-efficacy because it is known to be positively related to achievement (Bandura et al., 1996; Zimmerman & Bandura, 1994; Zimmerman et al., 1992). There was a control for parental education because it was believed to affect

brokering and child's academic achievement in opposite directions. Years in the US was used as a control because it could affect familiarity with the US school system.

**Hypothesis 1b.** I predicted higher levels of brokering would be associated with higher achievement across academic subjects. I expected that there would be greater effects for language arts than for other subjects.

**Rationale.** Only one study to date has investigated whether language brokering has differential effects across different academic domains. Dorner and colleagues (2007) found a significant relation between high levels of brokering and reading test scores. They also found a non-significant positive correlation between high levels of brokering and math test scores. Qualitative research suggests that language brokering increases problem-solving and cognitive abilities (De Ment et al., 2005; McQuillan & Tse, 1995), which could be expected to result in equal gains across academic areas. Qualitative researchers also have argued that language brokering improves language abilities (McQuillan & Tse, 1995), which may result in brokers experiencing even greater gains in language arts. Tse (1995) reported grades for language brokers in English, math, and social studies, but she did not analyze whether they were statistically different from one another. Based on the means she reported, there are no obvious differences among academic subjects. The research on bilingualism has found positive effects on cognitive flexibility and linguistic awareness (Hakuta, 1987; Landry 1974), but it is unclear whether these benefits would affect achievement in academic subjects differentially. Based on these theories and the few existing findings, only tentative hypotheses could be made. I believed that higher levels of language brokering most likely would be associated

with higher performance across grades, with the strongest effects being on grades in language arts.

**Research question 2.** Is there a relation between language brokering and academic self-efficacy, controlling for years in the US?

**Hypothesis 2.** I predicted language brokering would not be found to be related to academic self-efficacy.

**Rationale.** This hypothesis was tentative because the small amount of research that has been done in this area has been inconclusive. Qualitative research with adult language brokers suggests that brokering may increase feelings of academic ability (De Ment et al., 2005; Tse, 1995); however, quantitative studies have found inconsistent results regarding relations of brokering to academic self-efficacy (Acoach & Webb, 2004; Buriel et al., 1998). Significant effects were found with one high school sample (Acoach & Webb, 2004) but not with another (Buriel et al., 1998). Studies with junior high and elementary school age brokers have not found that translating increased feelings of academic self-efficacy or the related concept of scholastic competence (Acoach & Webb, 2004; Weisskirch & Alva, 2002). One purpose of my study was to shed light on the question of whether language brokering is an age-graded phenomenon as has been suggested (Weisskirch & Alva, 2002). I believed that young brokers in middle school would not yet have an awareness of how their brokering skills may relate to their academic performance, and therefore would not rate themselves as higher in academic self-efficacy. Although it is not expected that effects will be found, it was important to test levels of academic self-efficacy both to add to the knowledge of how it may relate to

language brokering as well as to test for possible mediating effects between brokering and achievement. I controlled for years lived in the US because this could affect how comfortable children feel with the US academic system.

**Research question 3.** Is there a relation between language brokering and social self-efficacy, controlling for years in the US?

**Hypothesis 3.** I predicted that greater amounts of brokering would be associated with higher social self-efficacy scores.

**Rationale.** This hypothesis was also tentative due to a lack of conclusive findings about how brokering relates to beliefs about social abilities. Retrospective studies with adult brokers have found that brokering may increase self-assessments of maturity, independence and power (De Ment et al., 2005; McQuillan & Tse, 1995; Tse, 1995), and researchers have theorized this could lead to increased social self-efficacy (Buriel et al., 1998). The one quantitative study to test the relation between language brokering and social self-efficacy found a positive correlation with a high school sample (Buriel et al., 1998), while a study measuring “perceived social acceptance” among fifth grade language brokers did not find a significant effect (Weisskirch & Alva, 2002). Language brokers’ self assessments of social efficacy have never been measured with a middle school sample. Based on qualitative research (Shannon, 1990), I believed that brokers within this age group would have had sufficient brokering experience to gain confidence in the effectiveness of their social abilities. I controlled for years in the US because the amount of time children have been living in US culture could relate to how much children feel they are similar socially to their peers.

**Research question 4.** Is there a relation between language brokering and acculturative stress, controlling for parental education and years in the US?

*Hypothesis 4.* I predicted that greater amounts of brokering would be associated with lower levels of acculturative stress.

*Rationale.* Language brokers have frequently reported feelings of anger, stress and burden with regards to translating responsibilities (De Ment et al., 2005; McQuillan & Tse, 1995). With the exception of a recent study that found that brokering for more people was related to higher depression (Love & Buriel, 2007), however, quantitative studies have found few negative effects of brokering on psychological outcomes among Latinos (Buriel et al., 2006; Chao, 2006). The stress of acculturating is one that occurs not just for Latinos who broker but for all acculturating Latinos, especially immigrants and the children of immigrants. Brokering is a means by which children may gain bicultural competencies, such as improved language skills, and language brokering has been found to be associated with biculturalism (Acoach & Webb, 2004; Buriel et al., 1998). Biculturalism, in turn, is associated with protection against mental health problems (Bacallao & Smokowski, 2005). Thus, language brokering may actually serve as a protective factor against acculturative stress. A control for parental education was included to account for possible confounding effects of socio-demographic status on acculturative stress. Years in the US was used as a control to account for how the amount of time children have been experiencing the process of acculturation may relate to acculturative stress.

**Research question 5.** Does academic self-efficacy mediate the relation between language brokering and academic achievement, controlling for parental education?

*Hypothesis 5.* I proposed to test this relation only if language brokering was found to be correlated with academic self-efficacy, as in Research Question 2. If a correlation between language brokering and academic self-efficacy were found, I hypothesized that greater amounts of language brokering would be related to higher academic achievement in part through language brokering's connection to academic self-efficacy.

*Rationale.* Studies have found that academic self-efficacy is related to academic achievement (Multon et al., 1991). Based on the scarce research regarding academic self-efficacy and language brokering, and the inconclusive results that have been found from the two studies that tested this relation (Acoach & Webb, 2004; Buriel et al., 1998), it was uncertain whether the proposed study would find a relation between brokering and academic self-efficacy. As explained in Research Question 2, the young brokers in the present study may not yet have the maturity to recognize a relation between brokering skills and academic tasks. If brokering does predict academic self-efficacy, however, it is important to test whether any relation between brokering and academic achievement can be explained in part by brokering's effects on academic self-efficacy.

**Research question 6.** Does acculturative stress mediate the relation between language brokering and academic achievement, controlling for effects of parental education?

**Hypothesis 6.** I predicted that greater amounts of language brokering would predict higher academic achievement, in part, through greater amounts of brokering being associated with lower levels of acculturative stress.

**Rationale.** It was expected that greater amounts of language brokering would predict lower levels of acculturative stress (see Research Question 4) and would predict higher levels of academic achievement (see Research Question 1). In addition, for mediation effects to be shown, lower levels of acculturative stress were expected to predict higher academic achievement. This hypothesis was tentative because of the small amount of research in this area. Few studies have tested effects of acculturative stress on academic achievement. A study of early adolescent Latinos found that grades and acculturative stress were negatively correlated (Schwartz et al., 2007), and two other studies did not find a relation between acculturative stress and achievement (Hawley et al., 2007; Vázquez & García-Vázquez, 1995). Despite the limited findings, there is more reason to believe acculturative stress could affect academics as acculturative stress has been associated with a wide range of negative psychological and social outcomes (Williams & Berry, 1991).

### **Chapter 3: Method**

Originally, I planned to conduct this study with middle school students in central Texas. After completing an initial data collection, I determined that the sample was not large enough for the desired statistical analyses. I decided to treat the Texas data collection as a pilot study and to collect another, larger sample in a school district in southern California. I selected this district because I was moving to the area, and because of the district's large immigrant Latino population that made it an appropriate place for my study. In this chapter, I describe the procedure, participants, and measures used for the pilot study and for my current study.

#### **Procedure**

The Institutional Review Board of the University of Texas at Austin reviewed and approved my study proposal. I translated parental consent forms, child assent forms, and survey measures into Spanish. These forms were back-translated into English by a bilingual research assistant to ensure the English and Spanish versions were comparable. The research assistant and I discussed discrepancies in translations, and these were resolved by mutual agreement. English and Spanish versions of the Institutional Review Board-approved parental consent and assent forms are provided in Appendix A.

**Pilot study.** After obtaining permission from a public school district in central Texas to collect data in district schools, I began contacting principals to request their schools' participation. I obtained permission from two middle schools to collect data from their students. School administrators assisted with the distribution and collection of parent consent packets. Students were offered small incentives for returning consent

forms, regardless of whether their parents granted permission for their participation. After consent forms were returned, dates for data collection days were set. Data collection days took place in May 2008; participating students were summoned to complete survey packets in groups outside of their classrooms, such as in the library. Students participated only during non-academic classes.

At the beginning of data collection, I introduced myself and reminded students about the consent forms they had their parents complete. Students completed an assent form that was read aloud in English and Spanish. Assent forms and survey packets were available in English and Spanish, and students were asked to choose the packet in the language in which they felt most comfortable reading and writing. Students were encouraged to keep their responses private and to ask questions at any time. Students were reminded that they could withdraw participation at any time. After the students signed the assent forms, I read aloud special instructions for a measure of acculturative stress and went through the first question aloud. Students then completed the remainder of the acculturative stress scale and the rest of the study packet including a background questionnaire and measures of language brokering, academic self-efficacy, and social self-efficacy. Packets took approximately 30-45 minutes for students to complete.

A total of 47 students from the Texas schools participated, with 43 who identified themselves as language brokers and four who were non-brokers. Because I needed at least 90 to 130 language broker participants to conduct the desired statistical analyses for my study, I determined to treat the Texas data collection as a pilot study. I later sought an additional sample in southern California for my study.

In response to feedback from participants and observations made in the pilot study, I made several small changes to the wording in the questionnaires. Some items were altered to simplify language and increase clarity, but the meaning of items did not change. While administering the surveys in the pilot study, I realized it was best to have students first complete the acculturative stress measure, which was not the first measure in the packet, because it required special instructions for the students. Therefore, for the subsequent data collection, I determined to reorder the packets to begin with the acculturative stress scale.

**Current study.** Because I was moving to the Los Angeles, California area, I requested and obtained permission to complete my study in the Los Angeles Unified School District. I began contacting middle school principals in August 2009. The principals of School 1 and School 2 gave permission for me to survey students in their schools for my study. As in the pilot study, school administrators assisted with the distribution of parent consent packets to homeroom teachers, who in turn distributed consent packets to students. With permission from principals, I visited homeroom classrooms, where I gave a brief description of the study, reminded students about incentives for returning consent forms, and answered student and teacher questions about the study. After consent forms were returned, dates for data collection days were set. Data collection days took place in November and December 2009. As in the pilot study, students completed surveys individually in group settings outside of their classrooms and during non-academic classes. The procedure I used during the data collections was the

same as used during the pilot study data collection described above. All statistical analyses were conducted with the California sample only.

## **Participants**

A total of 237 students from the Los Angeles Unified School District participated. The district is very large, with approximately 693,680 students. The two participating schools were located within two miles of each other in the same suburban area of the district. School 1 was a middle school for grades 6-8 with approximately 1,992 students. The student body of School 1 was 91.6% Hispanic/Latino, 0.7% Asian/Pacific Islander, 4.7% Filipino, 2.0% Black/African American, and 1.2% White/European American. School 2 was a middle school for grades 6-8 with approximately 2,013 students. School 2's student body was 83.4% Hispanic/Latino, 4.3% Asian/Pacific Islander, 4.8% Filipino, 3.2% Black/African American, and 4.0% White/European American. The socio-economic backgrounds of families in School 1 were slightly lower than those of School 2 with 92.0% of students in School 1 and 84.1% of students in School 2 eligible for free or reduced price lunch (NCES, 2008).

Of the total participants, 92 (38.8%) were in the sixth grade, 87 (36.7%) were in the seventh grade, and 56 (23.6%) were in the eighth grade (grade was unknown for two participants). Participants' ages ranged from 10 to 14 years, with a mean of 12.06 years. Over half the participants were girls (61.2%) and 38.8% were boys. Two hundred twelve (89.5%) identified themselves as language brokers and 25 (10.5%) were non-brokers. Five of the 212 language brokers were not Latino, making a total of 207 Latino language brokers. Statistical tests of the relations of language brokering with child outcomes were

done with the 207 Latino language broker participants. Although the participants were ethnically diverse, the majority were of Mexican heritage (see Table 1). One hundred seventy four (73.4%) were born in the US, and 63 (26.6%) were born outside of the United States. Those born outside the US had lived in the United States an average of 6.9 years.

Table 1: Child Ethnic Heritage by Nativity of Parents and Grandparents

<i>Ethnic Heritage</i>	<i>N (Total participants by group)</i>	<i>% (Total participants)</i>	<i>N (Latino language brokers by group)</i>	<i>% (Latino language brokers)</i>
Mexican	149	62.87	135	65.22
Salvadoran	29	12.24	27	13.04
Guatemalan	15	6.33	14	6.76
Mexican and Salvadoran	11	4.64	10	4.83
Mexican and Other	11	4.64	10	4.83
Salvadoran and Other	6	2.53	5	2.42
Other Central American	5	2.11	5	2.42
African American/African American and Other	4	1.69	0	0.00
Filipino	3	1.27	0	0.00
Other	4	1.69	1	0.00
Total	237	100.00	207	100.00

## **Measures**

Data were obtained through the use of self-report surveys, school records, and information provided by participants' parents on consent forms.

**Demographics Questionnaires.** Participants completed a background questionnaire (see Appendix B) in which they reported their age, grade, gender, ethnic background, nativity of parents and grandparents, years living in the US (if born outside the US), home language information, grades in which they attended bilingual and/or ESL classes, grades from their last report card, and information about birth order. On the study consent form, parents were asked to report information about the child's ethnicity, nativity of the child's parents and grandparents, number of years the child had lived in the United States, and parents' years of schooling. Some of the demographic questions (such as nativity of parents and grandparents) were duplicated on the student background survey and parent consent form in order to gain the most complete and accurate information. Where the child and parent had each answered the same questions, the parent response was used because it was believed parents were more likely to provide accurate information about nativity of family members and the child's number of years in the US. Where parent responses were missing, the child's responses were used.

**Language brokering.** The language brokering scale used in this study (see Appendix C) was based on that used by Dorner and colleagues (2007). This scale was originally developed by Tse (1995) and later revised by Buriel and colleagues (1998); it was further revised by Dorner and colleagues (2007). The scale contained an initial screening question and then three additional sections regarding different aspects of

language brokering. The survey started with a screening yes/no question about whether the participant had ever translated between Spanish and English for other people. Those who checked “yes” were then asked to indicate at what age they first began translating. Children who answered “no” to the first question were instructed to skip the rest of the measure and go on to the next measure. During survey administration, four participants indicated they did translate but not in Spanish. These children were instructed to write in the language in which they translated and to complete the rest of the survey.

The “people” section of the language brokering scale contained a list of nine items regarding people for whom the broker had translated and how often; this indicated the frequency with which the child translated for people. The last item of the “people” section allowed the participant to add a person for whom they had translated if it was not included in the list. Answers were chosen from a 5-point Likert scale ranging from 1 = “Never” to 5 = “Every day”. Several participants circled a frequency on the last item of this section but did not write in another person for whom they translated. Only those responses that contained a specific additional person for whom the respondent translated were included; otherwise the frequency for this item was coded as “never”.

The “places” section of the language brokering scale contained a list of 14 places (e.g., school, doctor’s office, store) where the broker may have translated. Participants circled all the places where they had translated and could add one location if it was not included in the list. The “things” section asked participants to circle all the things (e.g., report cards, legal documents, phone calls) they had translated from a list of 18 items. Participants could add one “thing” they had translated if it was not included in the list.

Based on qualitative research (De Ment et al., 2005), some translation activities are considered more difficult than others. Like Buriel and colleagues (1998) and Dorner and colleagues (2007), I weighted some things more heavily than the other “things” items based on difficulty. The less difficult “things” items were given a weight of one and the more difficult “things” items (bills, bank statements, legal documents, job applications, rental contracts, and insurance forms) were given a weight of two.

The items and wording of the scale were similar to those in Dorner and colleagues’ (2007) study. I chose to add an item regarding age at which translating began and a few additional “places” and “things” items suggested by R. S. Weisskirch (personal communication, April 11, 2005). In addition, the Likert scale for the “people” section in the measure used in this study contained more specific descriptions of frequency of translating (e.g., “once a month”, “once a year”) as compared to the choices (e.g., “often”, “sometimes”) for the Likert scale in the “people” section of Dorner and colleagues’ (2007) language brokering measure. This was done to gain more specific information about how often brokers translate. The calculation of responses to this measure also differed from Dorner and colleagues’ (2007) approach in which they created three categorical variables representing “active,” “partial,” and “non-language brokers.” Instead, like Buriel and colleagues (1998), I chose to calculate a continuous total brokering score by summing scores across the “people,” “places,” and “things” sections; this score represented the degree to which participants engaged in language brokering activities. I preferred a continuous scale to a categorical scale because I believed that amount of engagement in brokering activities is best conceptualized as a

continuous range of behaviors. Furthermore, I believed creating discrete categories out of this continuous variable would waste variance and weaken the statistical analyses (Keith, 2006). Total language brokering scores could range from 9 to 85. The total brokering score represented a continuous variable with higher scores indicating greater involvement in translating activities.

To determine internal consistency reliability for this study's language brokering measure, a Cronbach's alpha was calculated for the sample of Latino language brokers. The Cronbach's alpha was based on 11 items (nine items from the "people" section, one item representing the total number of "places" where the child translated, and one item representing the number of "things" translated). The Cronbach's alpha for this measure was .66. It was determined that the Cronbach's alpha would increase to .67 if the item for "How often do you translate for other people?" was removed. Therefore, this item was removed from the scale, creating of new range of possible language brokering scores from 8 to 80. Actual scores in the sample ranged from 12 to 70.

**Academic self-efficacy.** Academic self-efficacy was measured with a scale based on one developed by Webb, Moore, Rhatigan, Stewart, and Getz (2007) for 11th and 12th grade high school students in Houston, Texas. This measure was chosen because it assesses children's overall sense of the ability to use academic skills, and it has been found to have acceptable levels of internal consistency reliability (Webb et al., 2007). This study's scale contained seven items, and respondents were asked to rate their agreement on a 5-point Likert scale from 1 = "Strongly disagree" to 5 = "Strongly agree." Items pertained to students' beliefs about their ability to use general academic skills (e.g.,

“I know how to study to get good grades”). Total scores could range from 7 to 35. Actual scores in the sample ranged from 9 to 35. Appendix D contains the academic self-efficacy scale. For the sample of Latino language brokering in my study, a Cronbach’s alpha for this scale was computed to be .84.

**Social self-efficacy.** Social self-efficacy was assessed using the Adolescent Social Self-Efficacy Scale (S-EFF) by Connolly (1989). This scale was chosen because of its use of items and language pertinent to the age range of participants in this study. The S-EFF has also been regarded as robust in measuring social self-efficacy in young adolescents (Smith & Betz, 2000). The scale contained 25 items in five domains of social competence: 1) friendship and intimacy (7 items, e.g., “Express your feelings to another kid”), 2) social assertiveness (5 items, e.g., “Stand up for yourself when another kid in your class makes fun of you”), 3) social groups/parties (5 items, e.g., “Be involved in group activities”), and 5) giving and receiving help (3 items, e.g., “Ask another student for help when you need it”). Respondents were asked to rate their assessment of the difficulty of doing the task in each item on a 7-point Likert scale ranging from 1 = “Impossible to do” to 7 = “Extremely easy to do.” Scores could range from 25 to 175. Actual scores in the sample ranged from 47 to 175. The Cronbach’s alpha for this scale in my study was computed to be .92. Appendix E shows the specific items of the S-EFF.

**Acculturative stress.** Levels of acculturative stress were measured using the Societal, Academic, Familial, and Environmental Acculturative Stress Scale: Children’s Version (SAFE-C) by Chavez and colleagues (1997). The SAFE-C is a modification of the original SAFE by Padilla, Wagatsuma, and Lindholm (1985) which was an

acculturation scale developed for adults. I chose the SAFE-C because in a study with Latino elementary students, it was found to have good internal consistency reliability and construct validity (Chavez et al., 1997). The scale contained 36 items, and respondents were asked to rate the degree to which various potential stressors bothered them on a 6-point Likert scale from 0 = “Doesn’t apply” to 5 = “Bothers me a lot.” See Appendix F for measure items.

Items on the SAFE-C are subdivided into two domains: 1) general social stressors (16 items, e.g., “Asking questions in class”) and 2) stressors unique to ethnic groups associated with acculturation (20 items, e.g., “I don’t feel at home here in the United States”). The acculturation domain is further comprised of two components: 1) process-oriented stressors (14 items, e.g., “People think I am shy, when I really just have trouble speaking English”) and 2) stressors related to perceived discrimination (6 items, e.g., “I feel bad when others make jokes about people who are in the same group as me”). Total scores on the SAFE-C could range from 0 to 180. Actual scores in the sample ranged from 11 to 149. Scores for the general social stress domain could range from 0 to 80; process-oriented stress scores could range from 0 to 70; and perceived discrimination scores could range from 0 to 30. The Cronbach’s alpha for the total scale in my study was computed to be .88. In my study, I calculated a Cronbach’s alpha of .79 for general social stress, an alpha of .73 for process-oriented stress, and an alpha of .65 for stress associated with perceived discrimination.

**Academic achievement.** Academic achievement was measured with official grades obtained from school records as provided by the district. Parental permission was

obtained on the consent form to access children's school records to obtain grades. Grades were provided in math, language arts, science, and history for the reporting periods before and after the one in which students completed survey data. For the 35 students taking English as a Second Language for their English class, their ESL grades were used to calculate their language arts grades. A global measure of achievement, grade point average (GPA), was calculated by averaging children's grades across the four academic subjects.

### **Data Screening**

Data screening procedures were used to ensure the quality of the data. First, I examined and resolved patterns of missing data and outliers. Next, I ensured that assumptions of multiple regression analyses were met.

**Missing data, and outliers.** I examined patterns of missing data, and missing data from surveys completed by child participants generally appeared to be minimal and scattered randomly throughout. Two variables, however, had greater amounts of missing data. Approximately eight percent of responses to the number of years the child had lived in the US and years of parental education were missing. I chose pairwise deletion as the best method for handling missing data; I conducted pairwise deletion rather than listwise deletion to allow for the inclusion of cases where data for other variables were available. Mean replacement for missing values was not used due to problems with loss of variance. I identified outliers for all independent and dependent variables. Analyses were conducted with and without outliers coded as missing values. Results for all analyses were the same regardless of the inclusion of outliers, and outliers appeared to represent

normal variation; therefore, the data used in the analyses reported in Chapter 4 include outliers.

**Assumptions of multiple regression.** I examined the data for violations of assumptions of multiple regression analysis. I created residuals scatterplots for each regression model to test for assumptions of normality, linearity, and homoscedasticity. The residuals were normally distributed about the predicted dependent variable scores for all dependent variables; therefore, the assumption of normality was met. The residuals scatterplots also indicated linear relationships between the dependent variables and independent variables. Examination of residuals scatterplots revealed even variance of errors across all levels of the independent variables; therefore, the assumption of homoscedasticity was also determined to be met. To test if variables were multicollinear in the regression models, the tolerance and variance inflation factor (VIF) levels were examined for each regression model. Tolerance and VIF levels were acceptable for all the regression models thereby meeting the assumption of an absence of multicollinearity in the model.

## Chapter 4: Results

This study examined how the amount that children translate may relate with academic, emotional, and social outcomes. The first section provides descriptive statistics and summarizes relations among the variables. Next, results of the tests for the main hypotheses are presented using multiple regression analysis. Finally, tests for possible interaction effects are analyzed using multiple regression analysis.

### Descriptive Statistics and Relations among Variables

**Family and child language background.** Descriptive statistics for family and child language background data are presented in Table 2. On a scale from 1 = “Very Badly” to 5 = “Very Well,” children indicated that their mothers’ overall English language abilities were just below “Average” and slightly lower than fathers’ English language abilities (rated as just above “Average”). Overall parental language abilities were calculated as a mean of parents’ English speaking, understanding, reading, and writing abilities. Children estimated their overall abilities to speak, understand, and read English to be “Well” to “Very Well.” Participants overall had not spent much time in bilingual education or ESL classes, which supports children’s perceptions of having strong English abilities. Table 3, however, shows that close to two-thirds of participants had attended ESL and/or bilingual education classes for at least one year.

Answers to additional survey questions provide more information about participants’ language backgrounds. Approximately half (49.8%) of participants indicated that their first language was Spanish while 41.1% first learned English and Spanish at the same time (8.7% indicated English as their first language). All but one Latino language

broker participant reported currently using Spanish in the home. Of those who spoke Spanish in the home, slightly less than half (46.1%) indicated using about half English and half Spanish at home. Another 34.0% stated they used mostly Spanish with some English, while 12.6% indicated using mostly English and 7.2% only Spanish. The great majority of Latino language broker participants (93.2%) chose to complete the survey in English, suggesting most participants felt more comfortable reading and writing in English than in Spanish. Taken together, descriptive statistics regarding Latino brokers' language backgrounds suggest that most brokers had fairly balanced bilingual skills in English and Spanish.

Table 2: Family and Child Language Background of Latino Language Brokers

<i>Question</i>	<i>Means (Standard Deviations)</i>	<i>Scale Range</i>
Mother's overall English language ability ( <i>N</i> =205)	2.75 (1.17)	1 to 5
Father's overall English language ability ( <i>N</i> =199)	3.20 (1.18)	1 to 5
Child's overall English language ability ( <i>N</i> =207)	4.35 (.77)	1 to 5
Total years in bilingual education or ESL ( <i>N</i> =205)	1.51 (1.68)	-

Table 3: Total Years of Participation in ESL and/or Bilingual Education Classes

<i>Number of Years</i>	<i>Frequency</i>	<i>Percent</i>
0	78	38.0
1	43	21.0
2	38	18.5
3	17	8.3
4	11	5.4
5	13	6.3
6	4	2.0
7	1	.5
Total	205	100.00
Missing	2	-

**Translating data.** Out of the 214 Latino participants with at least one immigrant parent, 196 answered “yes” to the question “Do you ever translate (between English and Spanish) for other people?” This indicates a 91.6% prevalence estimate for language brokering in immigrant households and is consistent with previous estimates of the prevalence of language brokering (Buriel et al., 1998; Tse, 1995; Weisskirch & Alva, 2002). It should be noted that a large majority of Latino participants were language brokers (91.2%); possibly, this prevalence estimate appears artificially high due to translators self-selecting to participate in my study that they knew was about translating. Respondents indicated they began translating at a mean of 8.6 years, which is approximately two years younger than means reported in previous studies (Buriel et al., 1998; Tse, 1995). On the “people” section of the language brokering scale, children reported how often they translated for different people on a scale where 1 = “Never,” 2 = “Once a year,” 3 = “Once a month,” 4 = “Once a week,” and 5 = “Every Day.” Children indicated most often translating for their mothers, with a frequency of less than once a

week but more than once a month ( $M=3.76$ ,  $SD=1.40$ ). Children reported translating for fathers just under once a month ( $M=2.99$ ,  $SD=1.59$ ) and for other family members between once a year and once a month ( $M=2.63$ ,  $SD=1.42$ ). Figures 2 through 4 provide frequency data for the people, places, and things sections of the translating scale. Children reported most often translating at home, parent-teacher conferences, stores, and school. The most common things children translated were words, letters, school information, conversations, and phone calls.

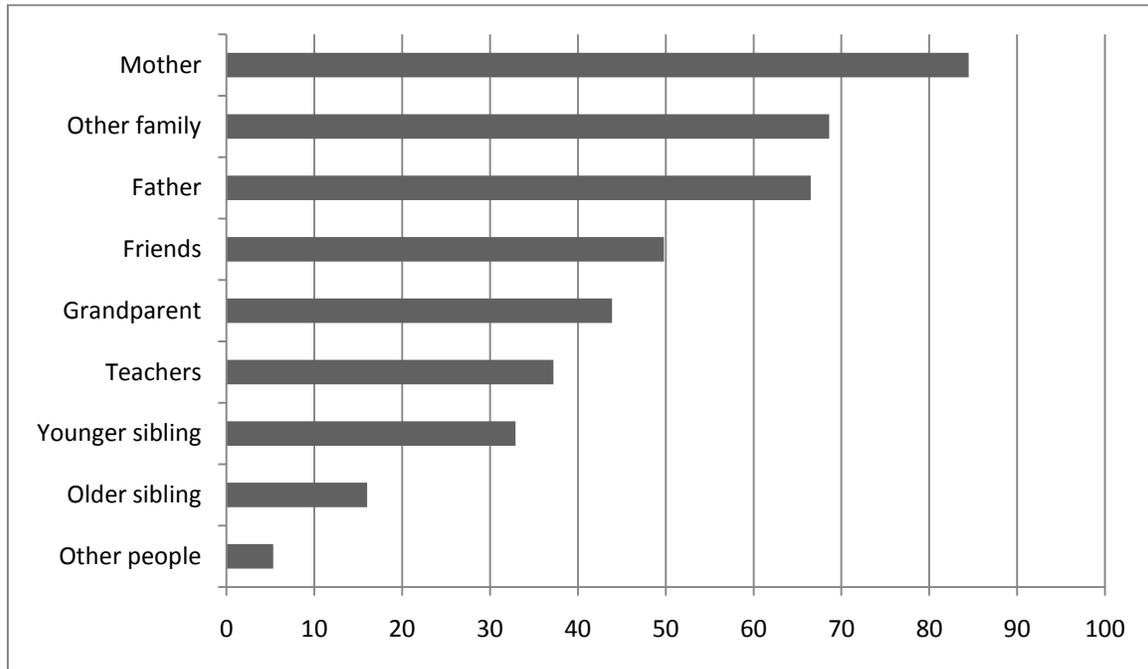


Figure 2: Percentage of participants who reported translating at least once a year for various people ( $N=207$ )

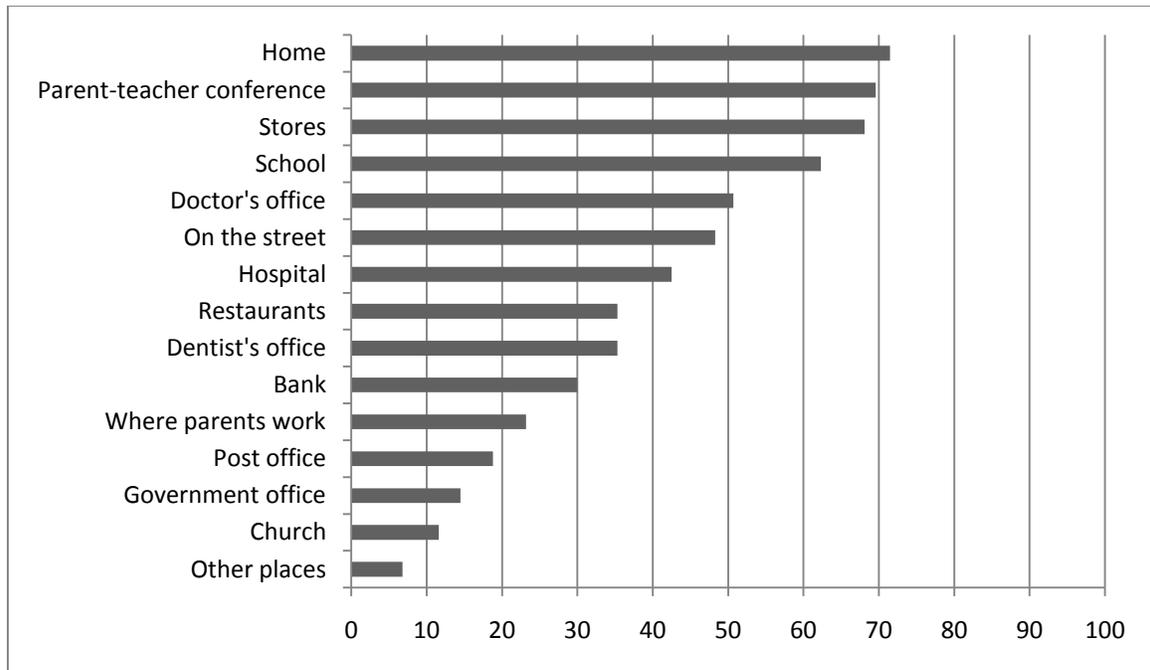


Figure 3: Percentage of participants who responded “yes” to translating at various places

(*N*=207)

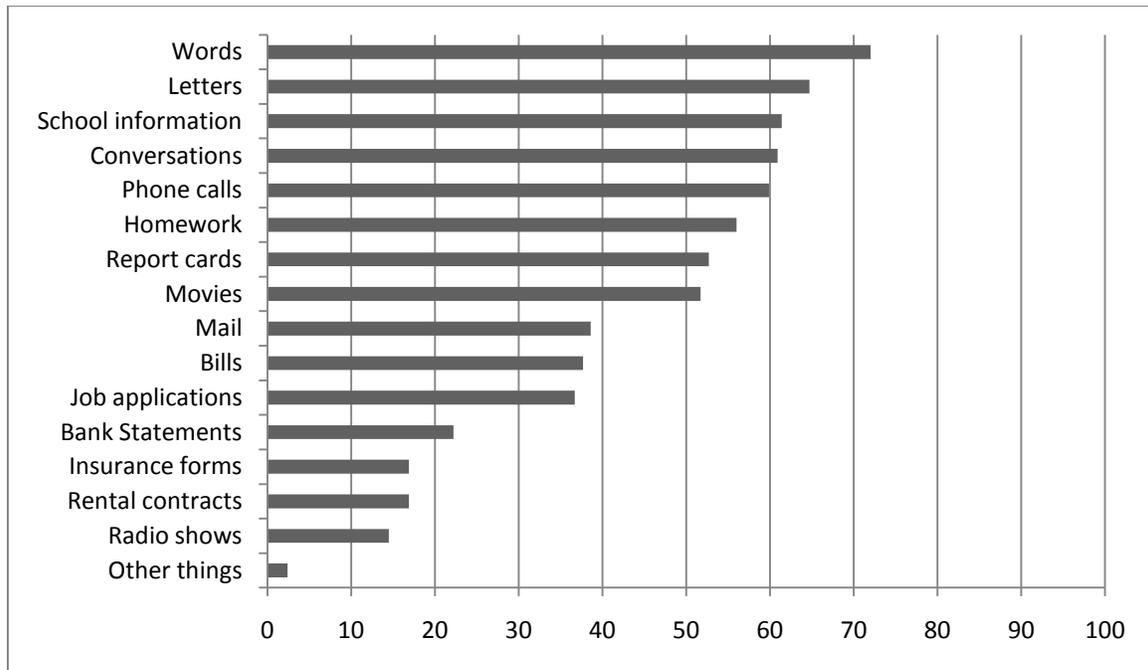


Figure 4: Percentage of participants who responded “yes” to translating various items (N=207)

**Independent and dependent variables.** Means, standard deviations, and Cronbach’s alphas for model variables are presented in Table 4. Children reported low levels of acculturative stress, with the average child’s responses indicating “almost never” feeling bothered by various stressors. Children showed a high overall level of academic self-efficacy, indicating on average that they agreed with various statements about their ability to perform academically; the scale ranged from 1=Strongly disagree to 5=Strongly agree. Although still generally positive, children reported slightly less confidence in social self-efficacy. On a scale from 1=Impossible to do to 7=Extremely easy to do, children’s average responses were just above the middle. Participants had

overall good academic achievement, with an overall mean GPA of low B. On average, participants had lived in the US for most of their lives. Their parents' average level of education was between ninth and tenth grade.

Table 4: Means, Standard Deviations, and Cronbach's  $\alpha$  for Model Variables

<i>Variable</i>	<i>M</i>	<i>S.D.</i>	<i><math>\alpha</math></i>	<i>Scale Range</i>
Translating scale ( <i>N</i> =207)	34.28	11.49	.67	8 to 80
Acculturative stress ( <i>N</i> =207)	1.91	.72	.88	0 to 5
Accult. stress-general social ( <i>N</i> =207)	2.16	.84	.79	0 to 5
Accult. stress-process ( <i>N</i> =207)	1.67	.75	.73	0 to 5
Accult. stress-discrimination ( <i>N</i> =207)	1.77	1.02	.65	0 to 5
Academic self-efficacy ( <i>N</i> =207)	4.04	.61	.84	1 to 5
Social self-efficacy ( <i>N</i> =207)	4.77	1.10	.92	1 to 7
G.P.A. ( <i>N</i> =202)	80.77	10.00	-	-
Years in U.S. ( <i>N</i> = 192)	10.44	2.90	-	-
Years of parental education ( <i>N</i> =192)	9.57	3.28	-	-

**Relations among variables.** Table 5 presents simple bivariate correlations showing the relations among variables of interest. Children showed a tendency to view their abilities as similarly positive or negative across areas. This can be seen in children's self-assessed English language abilities correlating positively with academic self-efficacy and social self-efficacy; academic self-efficacy and social self-efficacy were also

positively correlated. Similarly, those who reported feeling higher levels of acculturative stress reported lower social self-efficacy. Children with higher achievement had significantly higher levels of academic self-efficacy. Amount of translation was shown to be significantly associated with total acculturative stress; those reporting greater amounts of translating indicated higher levels of acculturative stress. Acculturative stress was negatively associated with achievement; in other words, children with higher acculturative stress had lower GPAs. Translating was also negatively associated with achievement, such that those who reported more language brokering activity had lower achievement. There was a positive correlation between translating and total years in ESL and/or bilingual education indicating that children who translated more had attended more years of bilingual education or ESL classes. Somewhat surprisingly, parental education was not significantly related to any of the other variables of interest. Years in the US was only significantly positively correlated with children's self-assessed English language abilities and the acculturation process dimension of acculturative stress. Children's age did not relate to level of translating or academic or social self-efficacy; however, older children reported feeling lower levels of acculturative stress than younger children.

Table 5: Intercorrelations Among Variables of Interest

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Translating	-	-.17*	-.11	.07	.15*	.01	.28**	.16*	.04	-.10	.09	-.03	.22**
2. GPA		-	.30**	.12	-.15*	-.09	-.17*	-.14	-.06	-.02	.01	.03	-.08
3. Acad. Self-Efficacy			-	.23**	-.13	-.07	-.17*	-.11	-.05	.05	-.02	.24**	-.01
4. Soc. Self-Efficacy				-	-.19**	-.23**	-.12	-.10	.04	.00	.10	.29**	.02
5. Accult. Stress: Total					-	.89**	.86**	.76**	-.08	-.07	-.29**	-.13	.10
6. Accult. Stress: Social						-	.61**	.53**	.05	-.04	-.27**	-.09	.00
7. Accult. Stress: Process							-	.61**	-.21**	-.06	-.26**	-.17*	.18**
8. Accult. Stress: Discrimination								-	-.07	-.09	-.16*	-.06	.08
9. Years in US									-	-.02	.04	.26**	-.04
10. Parental Ed										-	-.11	.11	-.02
11. Age											-	.02	.03
12. Language Ability												-	-.10
13. Yr in ELS/Bil. Ed													-

Note: \*designates that the correlation is significant at  $p < .05$ ; \*\*designates that the correlation is significant at  $p < .01$

Because it has been suggested that the eldest child may be the most likely to translate for the family (Valenzuela, 1999), I examined results related to birth order. Frequency data revealed that 39% of brokers were either the eldest or only child, compared to 37% who were a middle child, and 25% who were the youngest child. To test for a possible relation of birth order and amount of translation, I conducted an ANOVA using four levels of birth order (only child, oldest, middle, youngest). The results of the ANOVA were not significant ( $F [3,203] = .61, p > .05$ ), indicating that birth order was not significantly associated with amount of language brokering.

Because girls have been found to broker more than boys, and it has been suggested that outcomes among language brokers may differ by gender (Valenzuela, 1999), I tested for possible effects of gender in the sample. There were more girls (61%) in the sample of language brokers than boys (39%), suggesting that the majority of language brokers may be girls. When I conducted a t-test, however, there was not a significant difference in the means of boys' and girls' language brokering scores,  $t(205) = .12, p > .05$ .

### **Tests of Research Questions**

**Hypothesis 1a.** I originally hypothesized that higher levels of language brokering would be associated with greater academic achievement, controlling for parental education, academic self-efficacy, and years the child has lived in the US. I determined to also include years in bilingual education or ESL classes in the model. The reason for this was that years in bilingual education/ESL classes positively correlated with language brokering in the sample. It is possible that years in bilingual education/ESL classes could

be a confounding variable relating to both translating and achievement. To test these relations, I used sequential multiple regression. In the first step, I regressed academic achievement (as measured by post-survey GPA) on parental education (measured by the higher of the mother's or father's years of schooling), academic self-efficacy, years the child has lived in the US, years in bilingual education/ESL, and prior achievement (measured by pre-survey GPA). In the second step, I regressed academic achievement on parental education, academic self-efficacy, years the child has lived in the US, years in bilingual education/ESL, prior achievement, and language brokering. The change in  $R^2$  was not significant when language brokering was added to the model ( $\Delta R^2 = .00$ ,  $F[1,176] = 1.06$ ,  $p > .05$ ), indicating that language brokering did not explain additional variance in the model..

Because of this, I focused on the first model before language brokering was added. The overall model with academic achievement regressed on parental education, academic self-efficacy, years child has lived in the US, prior achievement, and years in bilingual education/ESL was significant ( $R^2 = .79$ ,  $F[5,177] = 133.45$ ,  $p < .001$ ). The unstandardized regression coefficients indicated that only prior achievement had a statistically significant effect on achievement. The standardized beta for prior achievement was .94 suggesting a large effect of prior achievement on achievement (Keith, 2006).

To determine if different aspects of translating might be related to academic achievement, I ran three separate sequential regression models using the “people,” “places,” and “things” section of the language brokering scale. In the first step of each of

these three models, I regressed achievement on parental education, academic self-efficacy, years the child has lived in the US, years in bilingual education/ESL, and prior achievement. In the second step, I regressed achievement on parental education, academic self-efficacy, years the child has lived in the US, years in bilingual education/ESL, prior achievement, and finally either the “people,” “places,” or “things” aspect of language brokering. The change in  $R^2$  was not significant when “people” was added ( $\Delta R^2 = .00$ ,  $F[1,176] = .71$ ,  $p > .05$ ), “things” was added ( $\Delta R^2 = .00$ ,  $F[1,176] = 2.00$ ,  $p > .05$ ), and when “places” was added ( $\Delta R^2 = .00$ ,  $F[1,176] = .11$ ,  $p > .05$ ) to the second steps of each of the three models, indicating that none of these aspects of language brokering predicted increased variance in academic achievement.

**Hypothesis 1b.** Because it has been suggested that language brokering might have differential relations with achievement in different academic subjects (Dorner et al., 2007), I ran regressions to test for this. I conducted four separate sequential multiple regressions for each academic subject included in the data collection (math, language arts, science, and history). As in the model described above, I controlled for effects of parental education, academic self-efficacy, years in the US, years in bilingual education/ESL classes, and prior achievement (pre-survey grades for the academic subject). The addition of language brokering to the model did not result in significant changes in  $R^2$  when regressed on math achievement ( $\Delta R^2 = .00$ ,  $F[1,176] = 1.77$ ,  $p > .05$ ), language arts achievement ( $\Delta R^2 = .00$ ,  $F[1,176] = .58$ ,  $p > .05$ ), science achievement ( $\Delta R^2 = .00$ ,  $F[1,176] = .47$ ,  $p > .05$ ), or history achievement ( $\Delta R^2 = .00$ ,  $F[1,176] = .67$ ,  $p > .05$ ).

Next, I tested if different aspects of translating might be related to different academic subjects. I ran sequential regressions to predict achievement in math, language arts, science, and history. For each academic subject, I ran three separate regressions using the “people,” “places,” and “things” sections of the language brokering scale in place of the total brokering score in the second step. As in the models above, I controlled for effects of parental education, academic self-efficacy, years in the US, years in bilingual education/ESL classes, and prior achievement (as measured by pre-survey grades in the academic subject). The addition of the “people” aspect of translating to the model did not explain increased variance in math ( $\Delta R^2 = .00$ ,  $F[1,176] = 1.92$ ,  $p > .05$ ), language arts ( $\Delta R^2 = .00$ ,  $F[1,176] = 1.28$ ,  $p > .05$ ), science ( $\Delta R^2 = .00$ ,  $F[1,176] = .00$ ,  $p > .05$ ), or history grades ( $\Delta R^2 = .00$ ,  $F[1,176] = .05$ ,  $p > .05$ ). The addition of the “places” aspect of translating to the model also did not explain additional variance in post survey math ( $\Delta R^2 = .00$ ,  $F[1,176] = .52$ ,  $p > .05$ ), language arts ( $\Delta R^2 = .00$ ,  $F[1,176] = .76$ ,  $p > .05$ ), science ( $\Delta R^2 = .00$ ,  $F[1,176] = .03$ ,  $p > .05$ ), or history grades ( $\Delta R^2 = .00$ ,  $F[1,176] = .16$ ,  $p > .05$ ). Finally, the addition of the “things” aspect of translating to the model did not explain increased variance in math ( $\Delta R^2 = .00$ ,  $F[1,176] = .62$ ,  $p > .05$ ), language arts ( $\Delta R^2 = .00$ ,  $F[1,176] = .78$ ,  $p > .05$ ), science ( $\Delta R^2 = .01$ ,  $F[1,176] = 2.25$ ,  $p > .05$ ), or history grades ( $\Delta R^2 = .00$ ,  $F[1,176] = 1.50$ ,  $p > .05$ ).

**Hypothesis 2.** Language brokering was not expected to be significantly associated with academic self-efficacy after controlling for years the child has lived in the US; however, the hypothesis was speculative due to the limited amount of previous research available. To test the hypothesis, I used sequential multiple regression. In the

first step, I regressed academic self-efficacy on years the child has lived in the US. In the next step, I regressed academic self-efficacy on years the child has lived in the US and language brokering. The change in  $R^2$  was not significant when language brokering was added to the model ( $\Delta R^2 = .01$ ,  $F[1,189] = .04$ ,  $p > .05$ ), indicating that language brokering did not explain additional variance in the model. The standardized beta for years in the US was also not significant.

To determine if different aspects of language brokering were associated with academic self-efficacy, I ran three separate sequential multiple regression models, using the “people,” “places,” and “things” sections of the language brokering scale. In the first step of each model, I regressed academic self-efficacy on years the child has lived in the US. In the second step of each model, I regressed academic self-efficacy on years in the US and either the “people,” “places,” or “things” dimension of the language brokering scale. In contrast to the relation of language brokering as a whole to academic self-efficacy, the results showed that the “people” aspect of brokering did explain additional variance in academic self-efficacy,  $\Delta R^2 = .02$ ,  $F(1,189) = 4.43$ ,  $p < .05$ . The standardized beta was  $-.15$  indicating an inverse relation between language brokering for people and academic self-efficacy. The change in  $R^2$  was not significant when “places” was added ( $\Delta R^2 = .00$ ,  $F[1,189] = .03$ ,  $p > .05$ ) or when “things” was added ( $\Delta R^2 = .00$ ,  $F[1,189] = .51$ ,  $p > .05$ ) to the models, indicating that the “places” and “things” aspects of language brokering did not predict increased variance in academic achievement.

**Hypothesis 3.** Language brokering was expected to be significantly positively associated with social self-efficacy after controlling for years child has lived in the US.

To test this hypothesis, I used sequential multiple regression. In the first step, I regressed social self-efficacy on years the child has lived in the US. In the second step, I regressed social self-efficacy on years the child has lived in the US and language brokering. The change in  $R^2$  was not significant when language brokering was added to the model ( $\Delta R^2 = .01, F[1,189] = .87, p > .05$ ), indicating that adding language brokering did not explain additional variance in the model. The standardized beta for years the child has lived in the US was also not significant.

To determine if different aspects of language brokering were related to social self-efficacy, I ran three separate regression models using the “people,” “places,” and “things” aspects of the language brokering scale. In the first step of each model, I regressed social self-efficacy on years in the US. In the second step of each model, I regressed social self-efficacy on years in the US and either the “people,” “places,” or “things” dimension of language brokering. The change in  $R^2$  was not significant when “people,”  $\Delta R^2 = .00, F(1,189) = .01, p > .05$ , “places,”  $\Delta R^2 = .01, F(1,189) = 2.15, p > .05$ , and “things,”  $\Delta R^2 = .01, F(1,189) = 1.67, p > .05$ , were added to the models, indicating that none of these aspects of language brokering explained additional variance in social self-efficacy.

**Hypothesis 4.** I hypothesized that higher levels of language brokering would be associated with lower acculturative stress, controlling for parental education and years the child has lived in the US. Language brokering and acculturative stress were shown to be positively correlated as was seen in Table 5. Sequential regression was used to test the association of language brokering and acculturative stress after holding constant the

effects of parental education and years the child has lived in the US. In the first step, I regressed acculturative stress on parental education and years the child has lived in the US. The unstandardized coefficients indicated that neither parental education nor years the child has lived in the US significantly contributed to acculturative stress. Next, acculturative stress was regressed on parental education, years the child has lived in the US, and language brokering. The change in  $R^2$  was significant ( $\Delta R^2 = .02$ ,  $F[1,179] = 4.11$ ,  $p < .05$ ), indicating that adding language brokering to the model explained an additional 2.2% of variance in the model. The unstandardized coefficient for language brokering was significant at  $p < .05$ . The effect size appears small ( $\beta = .15$ ) as compared to effect sizes for acculturative stress of between .21 and .46 found in studies with Latino adults (Negy, Schwartz, & Reig-Ferrer, 2009; Miranda & Matheny, 2000); however, it appears to be a moderate effect when compared with standardized betas of between .09 and .17 reported in a study of Latino early adolescents (Zamboanga, Schwartz, Jarvis, & Van Tyne, 2009).

To determine if the relation of language brokering to acculturative stress was different for different aspects of language brokering, I ran three separate regression models using the “people,” “places,” and “things” aspects of the language brokering scale. In the first step of each model, I regressed acculturative stress on parental education and years in the US. In the second step of each model, I regressed acculturative stress on parental education, years in the US, and either the “people,” “places,” or “things” aspect of language brokering. The change in  $R^2$  was significant for the “people” aspect of language brokering,  $\Delta R^2 = .05$ ,  $F(1,179) = 8.56$ ,  $p < .01$ , indicating that translating for

people explained additional variance in acculturative stress. The standardized beta was .21, which appears to represent a large effect size for acculturative stress in this age group (Zamboanga, et al., 2009). The change in  $R^2$  was not significant for the “places” ( $\Delta R^2 = .01$ ,  $F[1,179] = 1.52$ ,  $p > .05$ ) or “things” ( $\Delta R^2 = .00$ ,  $F[1,179] = .63$ ,  $p > .05$ ) aspects of brokering, indicating that translating in more places and translating more things did not explain additional variance in acculturative stress.

In contrast to my hypothesis that language brokering would be associated with less acculturative stress, these results showed that children who brokered more experienced higher levels of acculturative stress. In light of arguments that language brokering creates stress in the family due to role reversal with parents (Baptiste, 1993; Umaña-Taylor, 2003), I wanted to test if translating frequency for certain people was related to acculturative stress. I correlated the individual items of the “people frequency” section of the language brokering scale with acculturative stress to find out if relations were different for translating for parents versus other adults. As Table 6 shows, translating for mothers, fathers, and grandparents was associated with acculturative stress, while there were not significant associations between acculturative stress and translating for siblings, other family members, teachers, friends, and other people.

Table 6: Correlations of Acculturative Stress and Frequency of Translating for People

<i>Person</i>	<i>Correlation with Acculturative Stress</i>
Mother	.14*
Father	.17*
Grandparents	.23*
Younger siblings	.05
Older siblings	.07
Other family	.08
Teachers	.01
Friends	.06
Other people	.12

*Note:* \*designates that the correlation is significant at  $p < .05$

I then considered that the relation of language brokering to acculturative stress in the sample may differ by the dimension of acculturative stress children experience. To test this, I reran the regressions of Hypothesis 4 using the three dimensions of acculturative stress: 1) general social stressors, 2) stress related to the process of acculturation, and 3) stress associated with perceived discrimination. Table 7 summarizes the results of these regressions. Language brokering predicted increased variance in process-oriented acculturative stress and in stress associated with discrimination when added to the model. Brokering was not, however, shown to predict increased variance in the social stress aspect of acculturative stress. In comparison to effect sizes of between .09 and .17 in a study of Latino early adolescents (Zamboanga, et al., 2009), the effect size of brokering for predicting process-oriented acculturative stress appears large ( $\beta = .28$ ) and for discrimination-related acculturative stress appears moderate ( $\beta = .15$ ).

Table 7: Summary of Sequential Regression Analysis for Variables Predicting Different Dimensions of Acculturative Stress ( $N=182$ )

<i>Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$	$R^2$	<i>F for <math>\Delta R^2</math></i>
<i>Social:</i>					
Step 1				.00	.36
Parental Education	-.16	.31	-.04		
Years in US	.23	.35	.05		
Step 2				.00	.00
Parental Education	-.16	.31	-.04		
Years in US	.23	.35	.05		
Translating	.00	.09	.00		
<i>Process:</i>					
Step 1				.05	4.63*
Parental Education	-.21	.23	-.01		
Years in US	-.76	.26	.21**		
Step 2				.13	16.31***
Parental Education	-.12	.22	-.04		
Years in US	-.79	.25	-.22**		
Translating	.26	.06	.28***		
<i>Discrimination:</i>					
Step 1				.01	1.25
Parental Education	-.17	.14	-.09		
Years in US	-.16	.16	-.07		
Step 2				.04	4.33*
Parental Education	-.15	.14	-.08		
Years in US	-.17	.16	-.08		
Translating	.08	.04	.15*		

Note: \* designates  $p < .05$ , \*\* designates  $p < .01$ , \*\*\* designates  $p < .001$

**Hypothesis 5.** I originally proposed to test if academic self-efficacy was a mediator of the relation between language brokering and academic achievement. Baron and Kenny (1986) propose that for there to be a mediator, three conditions must be met: 1) a significant relation between the predictor and the outcome variable, 2) a significant relation between the predictor and the mediating variable, and 3) a significant relation

between the mediator and the outcome variable when all of the variables are entered into the same equation. Because language brokering was not significantly correlated with academic self-efficacy in my sample, this violated the second of Baron and Kenny's (1986) conditions for a mediating effect, and thus a test for mediation was not applicable.

**Hypothesis 6.** I proposed to test if acculturative stress served as a mediator of the relation between language brokering and academic achievement. Examination of the correlation coefficients among language brokering, acculturative stress, and achievement revealed that the three initial conditions for a possible mediation as proposed by Baron and Kenny (1986) were met. I then used the Sobel test to determine if acculturative stress partially accounted for the influence of language brokering on achievement (Preacher & Leonardelli, 2006). Results of the Sobel test ( $Z = -1.47, p > .05$ ) showed that the relation of language brokering to achievement was not significantly reduced by the inclusion of acculturative stress in the model. Thus, acculturative stress was not found to mediate the relation between language brokering and achievement.

### **Tests for Possible Interaction Effects**

In examining the correlation matrix, age was negatively associated with total acculturative stress,  $r(205) = -.29, p < .01$ . In other words, older children reported less acculturative stress than did younger children. In addition, language brokering literature has suggested that there may be differential effects of language brokering depending upon the age of the broker (Weisskirch & Alva, 2002). Specifically, it has been suggested that language brokering may be a more positive experience for older children than for

younger ones. For this reason, I wanted to test for a possible interaction effect of age and language brokering on acculturative stress.

To test for an interaction effect, I used sequential multiple regression. I used centered measurements of age and language brokering, because centered measurements of independent variables provide the most accurate test of interaction effects (Keith, 2006). In the first step, I regressed total acculturative stress on age. In the second step, I regressed total acculturative stress on age and language brokering. In the final step, I regressed total acculturative stress on age, language brokering, and the cross product of age and language brokering. The addition of the interaction variable did not result in a significant change in  $R^2$  and thus did not explain additional variance in the model ( $\Delta R^2 = .00$ ,  $F[1,202] = .03$ ,  $p > .05$ ). Because results of Hypothesis 4 showed that brokering was related differently to the three dimensions of acculturative stress, I also ran these regressions using the three individual dimensions of acculturative stress. The addition of the interaction variable also did not result in significant changes in  $R^2$  for the social dimension ( $\Delta R^2 = .01$ ,  $F[1,202] = 1.01$ ,  $p > .05$ ), process dimension ( $\Delta R^2 = .01$ ,  $F[1,202] = 1.24$ ,  $p > .05$ ), or discrimination dimension ( $\Delta R^2 = .00$ ,  $F[1,202] = .01$ ,  $p > .05$ ) of acculturative stress. Tables 8 and 9 summarize results of these regressions.

Table 8: Summary of Sequential Regression Analysis for Variables Predicting Total Acculturative Stress ( $N=205$ )

<i>Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$	$R^2$	<i>F for <math>\Delta R^2</math></i>
Step 1				.08	18.12***
Age	-.23	.05	-.29***		
Step 2				.11	7.43**
Age	-.24	.05	-.30***		
Translating	.01	.00	.18		
Step 3				.11	.03
Age	-.24	.05	-.30***		
Translating	.01	.00	.18**		
Age x Translating	.00	.01	.01		

Note: \*\*designated  $p < .01$ , \*\*\*designates  $p < .001$

Table 9: Summary of Sequential Regression Analysis for Variables Predicting Dimensions of Acculturative Stress (N=205)

<i>Variable</i>	<i>B</i>	<i>SE B</i>	$\beta$	$R^2$	<i>F for <math>\Delta R^2</math></i>
<i>Social:</i>					
Step 1				.07	15.40***
Age	-3.97	1.01	-.27***		
Step 2				.07	.20
Age	-4.02	1.02	-.27***		
Translating	.04	.08	.03		
Step 3				.08	1.01
Age	-4.07	1.02	-.27***		
Translating	.03	.08	.03		
Age x Translating	.09	.09	.07		
<i>Process:</i>					
Step 1				.07	14.25***
Age	-2.94	.78	-.26***		
Step 2				.16	22.37***
Age	-3.27	.74	-.28***		
Translating	.28	.06	.31***		
Step 3				.16	1.24
Age	-3.23	.75	-.28***		
Translating	.28	.06	.31***		
Age x Translating	-.07	.07	-.07		
<i>Discrimination:</i>					
Step 1				.03	5.37*
Age	-1.09	.47	-.16*		
Step 2				.06	6.50*
Age	-1.21	.47	-.18*		
Translating	.09	.04	.18*		
Step 3				.06	.01
Age	-1.21	.47	-.18*		
Translating	.09	.04	.18		
Age x Translating	.00	.04	.01		

Note: \*designated p<.05, \*\*\*designates p<.001

## **Chapter 5: Discussion**

For as long as immigrants have been coming to the United States, their children have served as cultural and linguistic brokers for their families. Only in recent decades, however, have the contributions and experiences of these child language brokers been studied by researchers. A major purpose of this study was to “fill in the blanks” for the limited findings regarding academic and social outcomes among child language brokers. This study also sought to add to the knowledge about emotional outcomes associated with brokering; specifically, I examined the relation of brokering to the stress associated with negotiating differences among cultures. In this chapter, I will situate the results of this study within the extant body of research to better understand the pattern of findings and to develop suggestions for interventions with children and families.

### **Major Findings and Integration with Previous Research**

**Descriptive statistics.** Descriptive statistics from this study regarding the nature of language brokering activities yielded generally similar results to previous studies. Brokers have been found to translate more for mothers than fathers (Chao, 2006) as was the case in the present study. My study’s finding that brokers rated their mothers’ English skills as lower than their fathers’ English skills suggests that mothers may need more assistance with translating due to limited English abilities. Like other studies (Dorner et al., 2007; Orellana, Dorner et al., 2003), brokers in my study reported translating mostly at home. Brokers in my study most frequently translated words and letters, a finding also seen in previous research (Dorner et al., 2007; Weisskirch & Alva, 2002). The age at which brokers reported they began to translate in my study was about two years younger

than has been reported by high school brokers (Buriel et al., 1998; Tse, 1995). Perhaps the younger children in my study were better able to remember translating at younger ages than were older children who may have forgotten early brokering experiences.

**Tests for effects of birth order and gender.** The current study was the first to test for how birth order may be related to language brokering. Qualitative research has suggested that the eldest child or elder children in immigrant families generally perform the majority of language brokering tasks (Dorner et al., 2008; Valenzuela, 1999). While the majority of participants in the current study were the eldest (34%) or only child (5%), a substantial number were middle children (37%) or youngest children (25%). In addition, birth order was not found to relate to amount of brokering. It is likely, as Dorner and colleagues (2008) observed, that siblings often work together to share language brokering tasks.

Possible differences in the language brokering experience by gender were also examined in my study. The greater number of girl participants suggests that girls may be more likely to translate than boys, but it is unknown whether other factors contributed to the higher participation of girls. My study's results did not find gender differences in total amount of translating. While two studies of high school students (Buriel et al., 2006; Chao 2006) found that girls brokered more than boys, other studies with junior and high school students (Acoach & Webb, 2004), middle school students (Love & Buriel, 2007), and fifth graders (Weisskirch & Alva, 2002) found no gender differences for amount of brokering. Possibly, gender differences in amount of brokering do not emerge until high school. In a sample of high school students, Buriel and colleagues (2006) found that girls

reported brokering more for people, in more places, and for more things than did boys. The authors argued that Mexican descent girls may broker more than boys as they progress through adolescence because of expectations that boys develop more independence from family while girls are expected to spend more time with family and fulfill family obligations. The literature overall suggests that not only may girls be more likely than boys to be chosen to broker but that as girls enter late adolescence, they are expected to perform more language brokering tasks than are boy brokers.

**Correlations among variables.** Results of correlational analyses corroborated some findings from previous studies regarding achievement and self-efficacy. In my study, academic self-efficacy and social self-efficacy were positively correlated, as has been found with fifth graders (Patrick et al., 1997) and in a sample of high school language brokers (Buriel et al., 1998). My study's findings show that this relation holds for children between 11 to 14 years as well. In the current study, academic self-efficacy was also positively associated with achievement as has been found in a sample of 11- to 14-year-olds (Bandura et al., 1996) and with high school language brokers (Acoach & Webb, 2004; Buriel et al., 1998). These results suggest that middle school age language brokers with higher academic self-efficacy are likely to achieve more academically, as has been seen with general middle school populations and older language brokers.

**Tests of hypotheses.**

*Language brokering and academic achievement.* Although there was a negative correlation between language brokering and achievement, results of regression analyses that controlled for additional predictors did not show that language brokering predicted

achievement among middle school students. My study may have not found effects on achievement for middle school students due to the age of participants and measurement issues. Perhaps among younger brokers, academic skills gained through brokering are narrow and specific, and skills become broader and more generalized as translators grow older.

In a study of young fifth-grade brokers, an association was found between brokering and higher standardized reading test scores (Dorner et al., 2007). These test score gains (Dorner et al., 2007) may reflect the specific skills of improved vocabulary and ability to scan written texts that could be acquired through translating. Young brokers would not have to be aware that they have gained these skills in order to use them on standardized tests. In a sample of older brokers, attending junior high (Acoach & Webb, 2004), language brokering was associated indirectly with higher grades through biculturalism. The grades used in that study (Acoach & Webb, 2004), like the grades used in my study, would have represented a broad set of academic skills (e.g., reading comprehension, multiplication, memorization, etc.) and other factors like motivation, homework completion, and school attendance; in contrast, standardized tests measure specific skills at one point in time. Perhaps as brokers grow older and enter junior high and high school, they begin to have the cognitive maturity to generalize broad academic skills gained through brokering to classroom tasks. For example, an older broker may have the ability to recognize that helping his parents represent their interests in a business negotiation could be similar to writing about the point of view of a character from a story in English class. I may not have found that brokering predicted achievement, like the

indirect connection found by Acoach and Webb (2004), because my study participants were younger; two-thirds of my study participants were 12 or younger compared to Acoach and Webb's (2004) study in which all participants were 13 and older. Also, because my study did not measure biculturalism, I was not able to test for a possible indirect effect of language brokering on grades through biculturalism.

Support that brokering is associated with higher grades as brokers grow older is seen in studies with high school students that found a direct connection (Buriel et al., 1998) and an indirect link through academic self-efficacy (Acoach & Webb, 2004). Because in my study academic self-efficacy was actually negatively associated with translating more frequently for people, it appears that my participants may have been too young to have gained confidence in their academic abilities through brokering. Further discussion of my study's findings regarding brokering and academic self-efficacy follow below. Thus, in looking at all findings regarding brokering and achievement, I argue that brokering may help children as young as fifth grade gain specific academic skills that could positively affect standardized test scores. By early adolescence, it seems academic skills gained through brokering may begin to help improve grades, at least indirectly. In middle to late adolescence, brokers may further solidify and generalize academic skills acquired through translating, and effects on grades may be stronger. Further research is needed to test this possible developmental pattern of language brokering and achievement.

An important aspect to note regarding findings of the current study and all published studies of language brokering and achievement, is that there is not evidence for

negative effects of language brokering on achievement. Despite the negative correlation between achievement and language brokering in my study, this connection was no longer found when accounting for other predictor variables. These findings should allay fears that language brokers could have poor academic outcomes. It has been suggested that child translators may suffer academically due to brokering taking time away from education or because brokers may make educational decisions, such as what classes to take, without their parents' knowledge (Umaña-Taylor, 2003). Concerns were also raised during informal conversations I had with teachers and parents about this research; it was expressed that brokers may have low academic performance because of missing school to accompany parents for translating tasks or because children may inaccurately translate school information like feedback from teachers during parent-teacher conferences. Teachers, parents, and administrators can be glad that language brokering does not appear to harm children's educational performance. In fact, the brokers in my study achieved solid B-minus averages (Mean GPA =80.77), that I discovered in a follow up analysis did not differ statistically from the average of non-brokers (Mean GPA = 82.90),  $t(229) = -1.08, p>.05$ . All this should not downplay concerns about generally low school achievement and high dropout rates among Latinos (Valencia, 2002); however, poor educational outcomes among Latinos do not appear to be related to language brokering duties.

***Language brokering and academic self-efficacy.*** Like the current study's findings regarding achievement, regression analyses also did not show that total language brokering predicted academic self-efficacy. In contrast to my hypothesis, translating more

frequently for people was associated with lower academic self-efficacy. It appears that, like my findings regarding language brokering and achievement, brokering may not be beneficial for academic self-efficacy until later adolescence, and may actually reduce feelings of academic self-efficacy in early adolescents. Language brokering has been found to be associated with increased academic self-efficacy among high school language brokers (Acoach & Webb, 2004; Buriel et al., 1998) but not in a sample of junior high school brokers (Acoach & Webb, 2004). These results may be explained by children's changing experience of language brokering tasks as they develop. In a recent longitudinal qualitative study, Dorner and colleagues (2008) found that child language brokers in late elementary school often reported feeling nervous about translating, while by early high school they had generally gained confidence about translating due to their increased vocabularies as well as greater comfort around adults. Results from my study suggest that middle school children may lack confidence in their translating abilities, and therefore may actually experience a reduced sense of efficacy about language and other academically-related skills used while brokering.

It is somewhat unclear why brokering more for people led to reduced academic self-efficacy while there were no effects for the number of things translated or the number of places in which translating occurred. Perhaps, children attach the most emotion to the interpersonal aspects of translating; that is, the most salient aspects of translating for children may be how often they translate for certain people. The quantity of items and places in which translating occur may not matter as much to young brokers as the way translating may affect relationships with people.

*Language brokering and social self-efficacy.* Regression analyses showed that more language brokering did not predict greater social self-efficacy as I had tentatively predicted it would based on the limited research. Language brokering has been found to relate to increased social self-efficacy in a sample of high school students (Buriel et al., 1998). I also expected brokering might help children feel more confident socially because of associations between brokering and ethnic identity (Weisskirch, 2005). As noted earlier, middle school age brokers are at an age when they might feel nervous when translating for adults (Dorner et al., 2008). Thus, while I had believed that child brokers might feel more confident socially through the process of interacting with adults, in actuality, the more frequent contact with adults may highlight for brokers their discomfort in attempting to function at an adult level. That said, it should be noted that brokering was not associated with *decreased* social self-efficacy.

Recent studies published since this study was conducted shed more light on ways that language brokering may be related to self-efficacy. With a sample of Chinese American adolescents, Wu and Kim (2009) found that positive *feelings of efficacy while brokering* were predicted by high levels of Chinese orientation. That relation was explained in part by a Chinese orientation leading to feeling more family obligation and mattering to parents more. In a study of high school immigrants from the former Soviet Union living in Israel, Oznobishin and Krunam (2009) found an interaction effect in which more language brokering led to decreases in feelings of self-efficacy when a measure of perceived parental support, warmth, and involvement was low but no relation to self-efficacy was found when perceived parental support, warmth, and involvement

was high. These two studies point to how the relation of language brokering and self-efficacy may be moderated by important family relationship variables. The lack of connection between language brokering and social self-efficacy in the current study may be due in part to not taking into account these children's family relationships. Future research could consider a follow-up study to include measures of family variables such as parents' and children's perceptions of family relationships and parenting stress.

*Language brokering and acculturative stress.* A significant finding from the regression analyses was that language brokering contributed to an increase in variance in acculturative stress when controlling for parental education and years living in the US. Unexpectedly, the relation was in the opposite direction from what I had predicted. Results showed that greater amounts of brokering predicted greater levels of acculturative stress. This was somewhat surprising given that greater amounts of language brokering have been associated with increased biculturalism (Acoach & Webb, 2004; Buriel et al., 1998), and biculturalism has been found to be a protective factor against psychological problems (Bacallao & Smokowski, 2005).

As was the case for the relation of brokering to academic self-efficacy, effects were different for the different aspects of translating. Translating more frequently for people was associated with greater acculturative stress, while no effects were found for translating more things or in more places. Again, it is possible that the stress associated with translating most relates to interpersonal relationships rather than to the number of items or places in which a child translates. That is, perhaps a child's strongest feelings

about translating are connected to thoughts about relationships with people for whom they translate.

To better understand my findings, I considered that acculturative stress, as measured in the current study, includes social stressors, perceived discrimination, and stress related to the process of acculturation. These dimensions are similar to the three dimensions of acculturative stress, 1) social/interpersonal, 2) societal, and 3) instrumental/environmental, that Caplan (2007) recently identified in a concept analysis of the literature on acculturative stress. In examining the relation of these different dimensions of acculturative stress with language brokering, I found that language brokering was associated with perceived discrimination and stress related to the process of acculturation; however, in my study language brokering was not associated with general social stressors.

This finding may appear to be in contrast to my argument that interpersonal aspects of brokering lead to the most stress. The general social stressors included in the acculturative stress scale, however, are common sources of social stress that all children may experience regardless of ethnicity or whether they translate. Therefore, the “people” items of the language brokering scale tap into interpersonal aspects of brokering, while the “social stressors” dimension of the acculturation scale accounts for more generalized social stress. A possible reason why brokers in the study did not experience greater general social stress is that their peer group consists primarily of other children at school. The student bodies of the schools that participated in my study were majority Latino; therefore, the brokers in my study would have shared many cultural factors with their

peers. Most research on acculturative stress has been conducted with adults, and it is also possible that the social stress dimension of acculturative stress affects adults more than children. In a study of the Acculturative Stress Inventory for Children (ASIC), analyses of psychometric properties identified two factors of acculturative stress, perceived discrimination and stress associated with immigration-related experiences; however, a factor related to social relationships was not found (Suarez-Morales, Dillon, & Szapocznik, 2007). The relevant aspects of acculturative stress and brokering for the children in the current study related to perceived discrimination and process stressors.

Regarding stress associated with discrimination, the act of translating possibly made children in my study come into more frequent contact with people who would discriminate against them. This was seen in Oznobishin and Krunam's (2009) study of former Soviet Union immigrants in Israel, in which the authors noted that brokers were sometimes berated while translating for parents in public (e.g., "If you want to speak Russian, go back to Russia") (p. 413). The authors noted that there was a particular lack of tolerance for former Soviet Union immigrants in Israel; however, given frequent anti-immigrant sentiments expressed in the United States, one can imagine that children of immigrants may feel emotionally vulnerable and discriminated against when their parents' immigrant status is emphasized. Dorner and colleagues (2008) similarly found that brokers reported situations in which they felt adults for whom they translated treated them with disdain.

The second type of acculturative stress found to be associated with language brokering in my study was stress resulting from the process of acculturating. These

process stressors included language difficulties, feelings that one is different or marginalized from the dominant culture, and feelings that one's family is different from oneself or the dominant culture. Through translating, children in my study may have felt embarrassment about their language skills by becoming aware of their more limited vocabularies, as Dorner and colleagues (2008) noted was reported by fifth- and sixth-grade brokers. Perhaps the children in my study also felt that when they translated, the differences between them and their families from the dominant English-speaking culture of the United States were highlighted. This can certainly be seen in the earlier example from Oznobishin and Krunam (2009) in which strangers insulted child translators and their families for using a different language from that of the dominant culture. When children translate, they may become more conscious of how their parents' limited English skills set their parents apart from the host culture, and also children may become more aware of how their own stronger English skills make them different from their parents. Middle-school age brokers may be especially vulnerable to stress associated with embarrassment about their families as this is an age at which children feel acutely self-conscious (Damon & Lerner, 2008).

Another way that brokering may have increased process-oriented acculturative stress in my study relates to concerns expressed by some about role-reversal with parents. It has been argued that language brokering leads to role-reversal with parents which may cause family conflict and stress (Baptiste, 1993; Umaña-Taylor, 2003). In the current study, correlational analysis of relations between brokering for specific people (e.g., mother, father) and acculturative stress, revealed that translating for parents and

grandparents was associated with acculturative stress while translating for siblings, teachers, friends, other family, and others was not. This finding appears to lend credence to the concern that, at least for younger middle school brokers, translating for parents (and grandparents) creates stress for children. Possibly this increased acculturative stress is due to feeling burden associated with role-reversal with parents. Children may feel a sense of discomfort in reversing the hierarchical family system traditional among Latinos (Love & Buriel, 2007). Dorner and colleagues (2008) have noted that in their observations of language brokering transactions, however, that parents and children work together to make meaning of translating tasks, and that parents maintain their roles as the primary decision-makers even when children translate. Thus, they argued that role-reversal rarely actually occurs when children translate. An important consideration, however, is how the children perceive and feel about translating tasks. While their parents may actually be making the final decisions, children may feel exaggerated senses of responsibility for family outcomes associated with translating. In fact, Dorner and colleagues (2008) observed that adolescents frequently used the terms “we” and “ours” when talking about family decisions, indicating a sense of shared responsibility for family well-being. It has also been found that higher levels of day-to-day annoyances, called “daily hassles,” were associated with the immigration-process dimension of acculturative stress in a sample of primarily Cuban-descent pre-adolescent children (Suarez-Morales & Lopez, 2009). Possibly, in my study, children’s translating responsibilities constituted “daily hassles” that created annoyance with family. Thus, translating for parents and grandparents may have resulted in children from my study

feeling increased tension in the family, as measured in some of the process dimension items of the acculturative stress scale.

Notably, in my study there was a negative correlation between age and acculturative stress, such that the older child brokers reported less acculturative stress than did the younger participants. This suggests that as brokers get older, they may feel less conflict around negotiating multiple cultures, and the link between language brokering and acculturative stress may disappear. Tests for interaction effects, however, found that the effects of language brokering, and different aspects of language brokering, on acculturative stress did not differ by age. Perhaps children do not begin to feel less acculturative stress associated with brokering until high school, or later.

**Developmental factors.** Taken together, results of the present study and previous research support a developmental approach in examining the effects of language brokering. Several associations of language brokering with positive outcomes, including achievement, academic self-efficacy, biculturalism, and respect for parents, have been found with high school age brokers (Acoach & Webb, 2004; Buriel et al., 1998; Chao, 2006) and reported by college students and adults in retrospective studies (De Ment, et al., 2005; McQuillan & Tse, 1995). My study also found that brokers experience less acculturative stress as they get older.

Studies that have involved younger adolescents and children have found a mix of negative, neutral, and positive outcomes associated with brokering. Young elementary school brokers have reported mostly negative feelings about brokering (Weisskirch & Alva, 2002), and studies with middle school children have found a link between language

brokering and depression (Love & Buriel, 2007). In my study, I also found that for middle school children, translating more frequently for people was associated with greater acculturative stress and decreased academic self-efficacy. I did not, however, find a relation between language brokering and achievement or social self-efficacy, when controlling for other predictor variables, among middle school brokers. Acoach and Webb (2004) did not find a relation between language brokering and academic self-efficacy for junior high brokers. Among younger adolescents and children, some positive associations have been found for language brokering and achievement (Acoach & Webb, 2004; Dorner et al., 2007). My study, however, did not replicate this link between brokering and achievement for young adolescents. Thus while younger brokers possibly benefit academically through brokering, it appears brokering may lead to poorer perceptions of academic abilities and worse emotional outcomes.

This mixture of positive and negative findings for younger brokers may be due to rapidly changing and developing social and cognitive skills. As Weisskirch (2005) suggested, younger brokers may not have developed sufficient skills for coping emotionally with the demands of brokering. Middle school and junior high school age brokers may be particularly vulnerable to feelings of self-consciousness and embarrassment associated with language brokering. Language brokering may make these early adolescents feel that they and their families are different from the mainstream when these children are at a developmental stage in which they place great importance on social acceptance (Damon & Lerner, 2008). Future longitudinal studies may find that while young children experience some negative feelings associated with brokering,

feelings of embarrassment and stress may peak around early adolescence. These negative emotions may later taper as brokers mature and enter high school.

**Revised conceptual model.** In my original conceptual model, I expected language brokering to be positively associated with social self-efficacy and academic achievement and negatively associated with acculturative stress. In addition, I expected academic self-efficacy and social self-efficacy to be positively associated. I expected greater acculturative stress to be associated with lower achievement. Finally, I expected academic self-efficacy to predict greater academic achievement.

Results of my data did not support some aspects of my original conceptual model, and some of my findings were actually in the opposite direction of what I had predicted. I found that language brokering was not associated with social self-efficacy and was actually negatively associated with academic self-efficacy. In addition, language brokering was positively associated with acculturative stress. The other predicted relations were found with my data; namely, that academic and social self-efficacy were positively related and that academic self-efficacy was associated with academic achievement. Acculturative stress also negatively predicted academic achievement as expected. Based on the results of my study, my revised conceptual model is as follows:

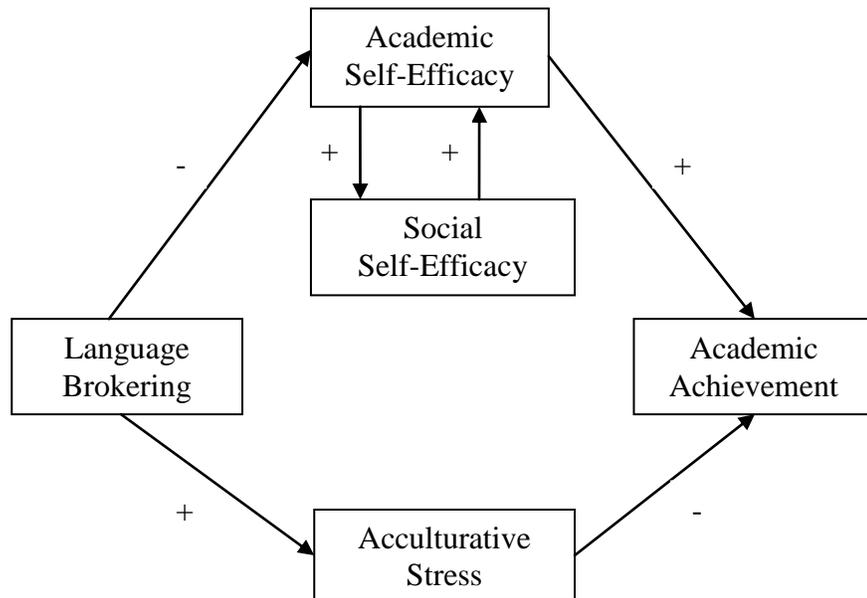


Figure 5: Revised Conceptual Model

### Limitations and Future Directions

While my study contributes to the understanding of outcomes related to the brokering experience, there are several limitations that should be considered when interpreting its results. First, the study relied on self-report data to measure language brokering. The brokering measure may not have captured the extent to which children engage in translating activities; children may have had difficulty recalling specific instances of language brokering, because they may perceive translating as an unimportant daily event. Dorner and colleagues (2008) noted that the child language broker participants in their study described translating as routine and sometimes seemed confused why translating was an activity worthy of studying. An interesting approach

that future researchers could consider would be to attempt to quantify in-vivo brokering transactions, perhaps through coding interactions or event sampling. Although qualitative studies have incorporated students' journals and classroom observations and described specific translating exchanges (Dorner et al., 2008; Orellana & Reynolds, 2008), no studies have used observations or recordings to objectively quantify amounts and types of brokering. Although a more objective measure of language brokering could be useful, my study's use of self-report scales for the constructs of acculturative stress, academic self-efficacy, and social self-efficacy seem appropriate and most accurate, because they measured children's subjective experiences.

A second limitation of the study was the content of the items for the acculturative stress scale I used. Over a third of the items measured general social stressors that may not relate strongly to the experience of acculturative stress for children. In fact, Suarez-Morales and colleagues' (2007) recent factor analysis of the Acculturative Stress Inventory for Children (ASIC) did not find a factor related to social relationships. This may explain why my study found that brokering was not related to the social stress dimension of acculturative stress while it was related to the perceived discrimination and the process of acculturation dimensions of the scale. Additionally, some of the items pertaining to perceived discrimination and the process of acculturation did not have strong face value in terms of how these items relate to stress associated with acculturation. Future studies of acculturative stress among children may obtain more valid results using a scale, such as the ASIC mentioned above (Suarez-Morales et al., 2007), that has identified factors of acculturative stress through factor analysis.

Another limitation of my study was that it did not include a measure of bilingualism. In comparison to monolinguals, bilinguals have been found to have higher nonverbal cognitive skills (Hakuta, 1987), greater cognitive flexibility (Landry, 1974), and greater metalinguistic knowledge (Cromdal, 1999; Galambos & Gondin-Meadow, 1990). It is possible that participants in my study with greater bilingual abilities may have had greater cognitive abilities and thus higher grades. Had my study included a measure of bilingualism, I may have found that bilingualism mediated the relation of language brokering to academic achievement. Increased brokering may have been seen to contribute to higher grades indirectly through a positive relation with bilingualism.

Another limitation of the current study was that parent-child relationship variables and feelings about translating were not measured. Recent studies have increasingly tested relations among brokering, feelings about brokering, family relationships, and outcomes. Brokering has been found to be associated with increased respect for parents (Chao, 2006). It has also been found that when children have positive feelings about family relationships, they have more positive feelings associated with brokering (Weisskirch, 2007; Wu & Kim, 2009). In addition, parental support has been found to mediate the association of language brokering and self-efficacy (Oznobishin & Krunam, 2009). Weisskirch (2007) also found that positive emotions about translating and having few family relationship difficulties each predicted higher self-esteem among brokers. Had my study's design incorporated measures of feelings about brokering and parent-child relationship factors, it may have shed light on the findings that brokering was associated with higher acculturative stress and lower academic self-efficacy. It is possible that

family environment factors and/or feelings associated with brokering moderate these relations.

A final limitation of the study was the specific sample used, which restricts generalizations of findings to other populations. The study was conducted only with Latinos, mostly of Mexican descent, and therefore relations may be different than would have been found with other ethnic groups. Chao's (2006) incorporation of three ethnic groups in her study, and the different relations of brokering and outcomes among them, point to the value of considering cultural factors in the study of language brokering. Another characteristic of the sample was that the participants were situated within schools and communities that were largely Latino. That is, the ethnic background of participants was reflective of the majority of people with whom they would have had most of their day-to-day interactions. When visiting the schools, I also observed that they appeared to have strong linguistic support for Spanish-dominant parents; one school offered a variety of informative pamphlets in English and Spanish in the front office, and both schools had bilingual staff available to assist with communication. Brokers who attend schools and/or who live in communities in which their own ethnic group is not predominant could experience language brokering very differently (Martinez, McClure, & Eddy, 2008; Oznobishin & Krunam, 2009). A final limiting aspect of the sample was that I used only middle school participants at one time point. While using this sample helped fill in some of the "gaps" for younger children's experience of language brokering, a longitudinal design would have reflected changes over time. Little language

brokering research has been longitudinal, although recent studies have begun to use longitudinal designs (Dorner et al., 2008; Wu & Kim, 2009).

Future language brokering research could more explicitly inform interventions with children and families. For example, Orellana and Reynolds (2008) describe how brokers' translating experiences could be leveraged into academic skills. The authors outlined specific practices educators could use to help children connect developing translating skills with language arts lessons around comprehending texts and paraphrasing written texts. These authors' approach seems especially helpful, because it focuses upon realms over which educators have control (e.g., teaching methods) rather than simply noting positive or negative outcomes associated with how much children translate. After all, regardless of research findings, immigrant parents are likely to continue to rely on their children for help with communication.

### **Implications for Practice**

In discussing the implications of this study, I considered how knowledge about children's experiences of language brokering could be applied to school psychologists' work. My study's findings suggest that young brokers may be especially vulnerable to stress associated with translating responsibilities. In therapy, we often find that clients experience a relief from stress when their feelings are reflected and we express empathy. Therefore, a first step for school psychologists could be to work with other educational professionals to let children know that their work as language brokers is recognized and valued. When educational professionals observe children engaging in the practice of translating at school, this presents an opportunity for them to open a conversation with

children about their experiences as brokers. Of course, adults must be sensitive to how they approach children about these matters, due to the risk of contributing to children's feelings of stress or embarrassment if they are "called out" in front of peers. One possible avenue through which children could talk about their experiences as brokers could be a school "translators group" facilitated by a school psychologist or counselor. School psychologists and counselors could provide "emotional scaffolding" for young brokers by helping children name and reconcile both their positive and negative feelings about brokering. Given that brokering research has found links between children's feelings about brokering and child emotional outcomes, an opportunity is presented to improve outcomes through helping children develop positive feelings about brokering responsibilities. The research has also pointed to the connection between positive family relationships and positive emotional outcomes for brokers. Therefore, parental involvement in "translators groups" could provide a way to help parents and children work through family relational issues that arise when parents ask children to translate.

### **Summary and Conclusions**

This study sought to extend the limited research with child translators, specifically by analyzing relations of language brokering with achievement, self-efficacy, and acculturative stress among Latino middle school children. Study results did not find gender or birth order differences in amount of brokering. Results corroborated previous findings of associations between academic self-efficacy and social self-efficacy (Buriel et al., 1998; Patrick et al., 1997) and between academic self-efficacy and school achievement (Acoach & Webb, 2004; Bandura et al., 1996; Buriel et al., 1998). The

findings of my study did not corroborate previous research that found positive links between language brokering and achievement (Acoach & Webb, 2004; Buriel et al., 1998; Dorner et al., 2007). My study found that translating more frequently for people was associated with decreased academic self-efficacy, in contrast to other research that found a positive connection between language brokering and academic self-efficacy (Acoach & Webb, 2004). Results also did not show a connection between language brokering and social self-efficacy as had been suggested may exist based on retrospective qualitative studies with former child brokers (De Ment et al., 2005; McQuillan & Tse, 1995).

In a major significant finding of the study, language brokering was not associated with lower acculturative stress as was predicted; rather, language brokering predicted higher acculturative stress in this sample. I found that language brokering was associated with two dimensions of acculturative stress: 1) perceived discrimination and 2) stress related to the process of acculturating. I also found that the frequency of translating for people was associated with overall acculturative stress while the number of things translated and number of places in which translating occurred was not. Brokering for parents and grandparents was associated with higher acculturative stress but brokering for other people was not associated with acculturative stress. It appears the most salient aspects of translating may be how translating affects interpersonal relationships. Perhaps language brokering for parents puts children in situations in which they might experience discrimination. Translating for parents may also increase children's sense that their family is different from the majority culture, or that they are different from their parents.

Stress also may be due to a sense of burden or discomfort at taking on parental roles. It was noted that brokers' acculturative stress decreased as they got older.

As Morales and Hanson (2005) observed, a point of controversy in language brokering literature has been whether brokering, in a broad sense, benefits or burdens children. As the body of literature on language brokering grows, it is becoming clearer that the answer depends on a multitude of variables. Recent studies have examined factors including age, family relationships, and feelings that appear to moderate the relation of language brokering with academic and emotional outcomes. Overall, language brokering research suggests that brokers in middle to late adolescence and older experience more positive outcomes and fewer negative outcomes associated with brokering. Brokers may be especially vulnerable to negative outcomes associated with brokering in early adolescence. In addition, more positive parent-child relationships and more positive feelings about brokering have been associated with better outcomes. A major gap in the research literature is that, because most studies of language brokers have been conducted with Latinos, very little is known about cultural differences among children who translate. Going forward, researchers can continue to stitch together the patchwork of findings to develop more sophisticated understandings about when, for whom, and in what ways language brokering relates to children's emotional, academic, and behavioral functioning.

## Appendix A: Parent Consent and Child Assent Forms

### CONSENT FORM

*IRB APPROVED ON: 3/26/2009*

*EXPIRES ON: 3/25/2010*

Title: Translating among Latino Middle School Students: Relations with Academic Achievement, Self-Efficacy, and Acculturative Stress

IRB PROTOCOL # 2007-10-0062

Conducted By: Louise Tedford, M.A., Doctoral Student of The University of Texas at Austin: Department of Educational Psychology, School Psychology program, Telephone: 512-471-4155, Email: [ltedford@mail.utexas.edu](mailto:ltedford@mail.utexas.edu)

Faculty Sponsor: Marie-Anne Suizzo, Associate Professor of The University of Texas at Austin: Department of Educational Psychology, Telephone: (512) 471-0379, Email: [marie.suizzo@mail.utexas.edu](mailto:marie.suizzo@mail.utexas.edu)

Funding Source: None

You are being asked to allow your child to participate in a research study. This form provides you with information about the study. The person in charge of the study will provide you with a copy of this form to keep for your reference and is available to describe the study further to you and answer all of your questions. Please read the information below and ask any questions about anything you don't understand before deciding whether or not to take part. Your participation is entirely voluntary. You can refuse to participate without penalty or loss of benefits to which you are otherwise entitled. You can stop your participation at any time and your refusal will not impact current or future relationships with UT Austin or your child's school. To do so simply tell the researcher you wish to stop participation. The researcher will provide you with a copy of this consent for your records.

**Purpose of the study:** The aim of the study is to learn how children who translate for their parents or other adults are affected academically, socially and emotionally. The information we learn from this study will help school administrators know how best to serve children from Spanish-speaking families and help teachers and parents help these children succeed in school.

**If you agree to participate in this study, we will ask to do the following:**

- **We will request access to your child's grade records** to retrieve his or her grades from the reporting period after the one in which he or she completed the surveys. Grades will be identified by student number rather than by name.
- **We will ask your child to do the following things:** Your child will be asked to fill out some questionnaires about him or herself. These questionnaires will include questions about languages spoken at home, experiences of translating, feelings about academic and social abilities, and possible feelings of stress associated with resolving cultural differences.

**Total estimated time to participate** in the study is 45 minutes.

**Risks of being in the study:** There are no known risks of participation. The questions your child will be asked to answer are not expected to cause him or her any discomfort. However, if any of the questions on the survey make your child feel uncomfortable, he or she can refuse to answer them and can discontinue participation in the study at any time.

**Benefits of being in the study:** If you choose to allow your child to participate in this study, you will help improve schools' and parents' knowledge about how children who come from Spanish-speaking families may be positively or negatively affected by translating responsibilities.

**Compensation:** Your child will receive a small gift such as a pencil for returning the permission form. All those who return this completed form, regardless of whether consent is given or refused, will be entered into a raffle to receive a **\$50 gift card for Wal-Mart.**

**Confidentiality and Privacy Protections:**

Participants' confidentiality will be protected by identifying them with number codes rather than by name. No information about any individual will ever be disclosed. The only exception to this is if the child discloses to the researcher or research assistants any information that indicates he or she has been or may be harmed, wants to harm others or wants to harm him- or herself. If such a disclosure is made, the school counselor and parent or guardian will be notified.

The data resulting from your participation may be made available to other researchers in the future for research purposes not detailed within this consent form. In these cases, the data will contain no identifying information that could associate you with it, or with your participation in any study.

The records of this study will be stored securely and kept confidential. Authorized persons from The University of Texas at Austin, members of the Institutional Review Board, and (study sponsors, if any) have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. All publications will exclude any information that will make it possible to identify you as a subject. Throughout the study, the researchers will notify you of new information that may become available and that might affect your decision to remain in the study.

**Contacts and Questions:**

If you have any questions about the study please ask now. If you have questions later, want additional information, or wish to withdraw your child's participation call the researchers conducting the study. Their names, phone numbers, and e-mail addresses are at the top of this page. If you have questions about your child's rights as a research participant, complaints, concerns, or questions about the research please contact **Jody Jensen, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects** at (512) 232-2685 or the Office of Research Support and Compliance at (512) 471-8871 or email: orsc@uts.cc.utexas.edu.

**You may keep the copy of this consent form.**

**Please return this form:**

You are making a decision about allowing your child to participate in this study. If you check the “Yes” box and include your signature below, this indicates that you have read the information provided above and have decided to allow him or her to participate in the study. If you later decide that you wish to withdraw your permission for your child to participate in the study, simply tell me. You may discontinue his or her participation at any time.

If you check the “No” box and include your signature below, this indicates that you have read the information provided above and have decided NOT to allow your child to participate.

YES, I have decided to allow my child to participate in the study. **I will allow the release of my child’s grades from the reporting period after the one in which he or she completes the study surveys. I understand my child’s grades will be identified by a student number and not by his or her name.**

NO, I have decided that I do NOT want my child to participate in the study.

\_\_\_\_\_  
Printed Name of Child

\_\_\_\_\_  
Signature of Parent(s) or Legal Guardian

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Investigator

\_\_\_\_\_  
Date

**If you have indicated YES, you permit participation, please answer the following questions:**

**What do you consider to be your child’s race or ethnicity?** \_\_\_\_\_

**Where was the child’s mother born? Country:** \_\_\_\_\_ **State:** \_\_\_\_\_

**Where was the child’s grandmother (mother’s mother) born?** \_\_\_\_\_

**Where was the child’s grandfather (mother’s father) born?** \_\_\_\_\_

**Where was the child’s father born? Country** \_\_\_\_\_ **State:** \_\_\_\_\_

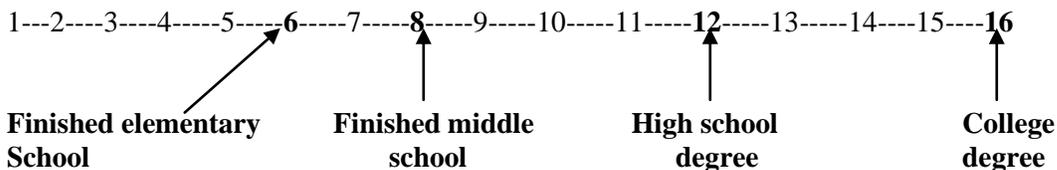
**Where was the child’s grandmother (father’s mother) born?** \_\_\_\_\_

**Where was the child’s grandfather (father’s father) born?** \_\_\_\_\_

**Where was the child born? Country:** \_\_\_\_\_ **State:** \_\_\_\_\_

**How many years has the child lived in the United States?** \_\_\_\_\_

**Please use this picture to answer the two questions below:**



**How many years of schooling has the child's mother had? \_\_\_\_ (Write in a number using the picture above).**

**How many years of schooling has the child's father had? \_\_\_\_ (Write in a number using the picture above).**

**If the child's mother or father has education beyond a college degree, please indicate which parent(s) and what postgraduate degree(s) he or she has: \_\_\_\_\_**

**For children 13 years and older:**

YES, I want to participate in the study.

“I have read the description of the study titled *Translating among Latino Middle School Students: Relations with Academic Achievement, Self-Efficacy, and Acculturative Stress* that is printed above, and I understand what the procedures are and what will happen to me in the study. I have received permission from my parent(s) to participate in the study, and I agree to participate in it. I know that I can quit the study at any time.”

NO, I do NOT want to participate in the study.

\_\_\_\_\_  
Signature of Child

\_\_\_\_\_  
Date

## ASSENT FORM

### Translating among Latino Middle School Students: Relations with Academic Performance, Feelings about Self, and Stress

I agree to be in a study about when children do and do not translate for other people, how they do in school, how they feel about themselves at school and socially, and how much stress they feel. This study was explained to my parent(s) or guardian(s) and they said that I could be in it. The only people who will know about what I say and do in the study will be the people in charge of the study.

I will be asked to fill out some forms that will be read aloud to me. The forms will ask questions about whether and how much I translate, how I feel about myself, and about whether I feel stress.

Writing my name on this page means that the page was read to me and that I agree to be in the study. I know what will happen to me. If I decide to quit the study, all I have to do is tell the person in charge.

---

Child's Signature

---

Date

---

Signature of Researcher

---

Date

## CONSENT FORM

*IRB APPROVED ON: 3/26/2009*

*EXPIRES ON : 3/25/2010*

Título del estudio: La Traducción entre Estudiantes Latinos de Escuela Secundaria: Relaciones con Logro Académico, Autoeficacia, y Tensión de Aculturación

Número de protocolo de IRB: 2007-10-0062

Conducido Por: Louise Tedford, M.A., Estudiante Doctoral de la Universidad de Tejas en Austin: Departamento de Psicología Educativa, Programa de Psicología Escolar, Teléfono: 512- 471-4155, Correo electrónico: ltedford@mail.utexas.edu

Patrocinador de Facultad: Marie-Anne Suizzo, Profesora de la Universidad de Tejas en Austin: Departamento de Psicología Educativa, Teléfono: (512) 471-0379, Email: marie.suizzo@mail.utexas.edu

Fuente de Financiamiento: Ningún

Se está pidiéndole que permita que su hijo/a participe en una investigación. Este formulario le provee información acerca del estudio. La persona que está en cargo del estudio le proveerá una copia de este formulario para su referencia, y también está disponible para describir el estudio para usted y responder a todas sus preguntas. Por favor, lea la información debajo y pregunte acerca de cualquier cosa que no entienda antes de decidir si quiera participar o no. Su participación es completamente voluntaria. Usted puede rehusar de participar sin pena ni pérdida ningún de beneficios a los cuales tiene derecho. Usted puede dejar de participar en cualquier momento y su respuesta negativa no afectará relaciones corrientes o futuras con la Universidad de Tejas en Austin o la escuela de su niño. Para hacerlo solamente hay que decir a la investigadora que usted desea parar la participación. La investigadora está disponible por teléfono y habla español. Usted puede guardar la primera parte de este consentimiento para sus archivos.

**Propósito del estudio:** El objetivo del estudio es aprender como los niños que traducen para sus padres u otros adultos son afectados académicamente, socialmente y emocionalmente. La información que aprendemos de este estudio ayudará a administradores escolares a saber como servir mejor a niños de familias de habla española y ayudará a profesores y los padres ayudar a estos niños a tener éxito en la escuela.

**Si usted consiente en participar en este estudio, pediremos hacer las cosas siguientes:**

- **Pediremos acceso a los archivos de las calificaciones de su niño/a** por el período de calificación después del período en que él o ella completó los cuestionarios. Las calificaciones serán identificadas por número de estudiante y no por nombre.
- **Pediremos a su niño que llene algunos cuestionarios** sobre él o ella. Estos cuestionarios incluirán preguntas sobre lenguas habladas en casa, las experiencias con la traducción, sentimientos sobre capacidades académicas y sociales, y sentimientos posibles de la tensión asociada con la resolución de diferencias culturales.

**El total del tiempo estimado para participar** en el estudio es 45 minutos.

**Riesgos de participar en el estudio:** No hay ningunos riesgos conocidos por participar en este estudio. No se espera que las preguntas hechas a su niño le causaran incomodidad. Sin embargo, si cualquiera de las preguntas en los cuestionarios hace su niño sentirse incómodo, él o ella puede rehusar contestarla y puede discontinuar su participación en el estudio en cualquier momento.

**Ventajas de participar en el estudio:** Si usted decide permitir que su niño participe en este estudio, usted ayudará a mejorar el conocimiento de las escuelas y los padres sobre como los niños que vienen de familias de habla española pueden ser afectados positivamente o negativamente por sus responsabilidades de traducir.

**Compensación:** Su niño recibirá un regalo pequeño como un lápiz por devolver la forma de permiso. Todos aquellos que devuelven esta forma completada, sin tener en cuenta si el consentimiento es dado o rechazado, serán entrados en una rifa para recibir una **tarjeta de regalo de 50 dólares para Wal-Mart.**

**Confidencialidad y Protecciones de Privacidad:** La confidencialidad de los participantes será protegida por identificarlos con códigos de número más bien que por el nombre. Ninguna información sobre cualquier individuo será revelada. La única excepción a éste es si el niño revela al investigador o ayudantes de investigación alguna información que indica que él o ella han sido o pueden ser dañados, quieren dañar a otros o quieren dañarse a si mismo. Si tal revelación es hecha, se notificará al consejero escolar y a los padres o guardián.

Los datos que resultan de su participación pueden ser hechos disponible a otros investigadores en el futuro para objetivos de investigación no detallados dentro de esta forma de consentimiento. En estos casos, los datos no contendrán ninguna información de identificación que podría ser asociada con usted, o con su participación en cualquier estudio.

Los archivos de este estudio serán almacenados bien y guardados confidenciales. Las personas autorizadas de la Universidad de Tejas en Austin, los miembros de **la Junta Institucional Examinadora** tienen el derecho legal de examinar sus archivos de investigación y protegerán la confidencialidad de aquellos archivos al mayor nivel permitido por la ley. Todas las publicaciones excluirán cualquier información que hará posible de identificarle como un sujeto. Durante todo el estudio, los investigadores le notificarán de información nueva que puede hacerse disponible y que podría afectar su decisión de permanecer en el estudio.

#### **Contactos y Preguntas:**

Si usted tiene alguna pregunta sobre el estudio por favor pregunte ahora. Si usted tiene preguntas más tarde, quiere más información, o desea retirar la participación de su niño llame los investigadores que conducen el estudio. Sus nombres, números de teléfono, y direcciones de correo electrónico están arriba al principio de esta página. Si usted tiene preguntas sobre los derechos de su niño como un participante de investigación, quejas, preocupaciones, o preguntas sobre la investigación por favor póngase en contacto con **Jody Jensen, Ph.D.**, quien es la presidente de la Junta Institucional Examinadora para la Protección de Sujetos Humanos de La Universidad de Tejas en Austin, en (512) 232-2685 o la Oficina de Cumplimiento y Apoyo de Investigaciones en (512) 471-8871 o correo electrónico: orsc@uts.cc.utexas.edu.

**Usted puede guardar esta copia de esta forma de consentimiento.**

**Favor de devolver esta página:**

Usted está haciendo una decisión sobre dar permiso a su niño de participar en este estudio. Si usted indica "Sí" por marcar esa caja e incluye su firma abajo, esto indica que usted ha leído la información proporcionada arriba y ha decidido permitir que él o ella participe en el estudio. Si usted decide más tarde que desea retirar su permiso para su niño para participar en el estudio, simplemente hay que decirme. Usted puede discontinuar su participación en cualquier momento.

Si usted indica "No" por marcar esa caja e incluye su firma abajo, esto indica que usted ha leído la información proporcionada arriba y ha decidido NO permitir que su niño participe.

SÍ, he decidido permitir que mi niño/a participe en el estudio. **Permitiré que la investigadora tenga acceso a las calificaciones de mi niño/a para el período de calificación de 6 semanas después del período en el cual él o ella completa los cuestionarios del estudio.** Entiendo que las calificaciones serán identificadas por número de estudiante y no por su nombre.

NO, he decidido que NO quiero que mi niño participe en el estudio.

\_\_\_\_\_  
Nombre del Niño

\_\_\_\_\_  
Firma de Padre(s) o Guardián Legal

\_\_\_\_\_  
Fecha

\_\_\_\_\_  
Firma de Investigadora Principal

\_\_\_\_\_  
Fecha

**Si usted ha indicado SÍ, usted permite la participación, por favor conteste las preguntas siguientes:**

**¿Qué considera usted que sea la raza o la pertenencia étnica de su niño?**

\_\_\_\_\_  
**¿Dónde nació la madre del niño? País: \_\_\_\_\_ Estado: \_\_\_\_\_**

**¿Dónde nació la abuela del niño (madre de su madre)? \_\_\_\_\_**

**¿Dónde nació el abuelo del niño (padre de su madre)? \_\_\_\_\_**

**¿Dónde nació el padre del niño? País: \_\_\_\_\_ Estado: \_\_\_\_\_**

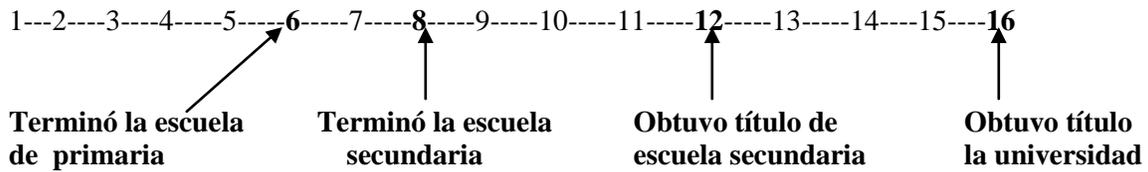
**¿Dónde nació la abuela del niño (madre de su padre)? \_\_\_\_\_**

**¿Dónde nació el abuelo del niño (padre de su padre)? \_\_\_\_\_**

**¿Dónde nació el niño? País: \_\_\_\_\_ Estado: \_\_\_\_\_**

**¿Por cuántos años ha vivido su niño en los Estados Unidos? \_\_\_\_\_**

Por favor use este dibujo para contestar las dos preguntas abajo:



¿Cuántos años de la educación ha tenido la madre del niño? \_\_\_\_\_ (Favor de escribir un número usando el dibujo arriba).

¿Cuántos años de la educación ha tenido el padre del niño? \_\_\_\_\_ (Favor de escribir un número usando el dibujo arriba).

Si la madre o padre del niño tienen educación más allá de un título de universidad, por favor indique cual(es) padre (s) y que título(s) posgraduado él o ella tiene(n):

\_\_\_\_\_

Para niños de 13 años o mayor:

Sí, quiero participar en el estudio.

“He leído la descripción del estudio titulado La Traducción entre Estudiantes Latinos de Escuela Secundaria: Relaciones con Logro Académico, Autoeficacia, y Tensión de Aculturación que es escrito encima, y entiendo lo que son los procedimientos y lo que me pasará en el estudio. He recibido el permiso de mi padre(s) para participar en el estudio, y consiento en participar en ello. Sé que puedo dejar el estudio en cualquier momento.”

NO, NO quiero participar en el estudio.

\_\_\_\_\_  
Firma del Niño

\_\_\_\_\_  
Fecha

## FORMULARIO DE ASENTIR

La Traducción entre Estudiantes Latinos de Escuela Secundaria: Relaciones con Logro Académico, Sentimientos sobre Mí, y Tensión

Consiento en estar en un estudio sobre cuando los niños traducen y no traducen para otra gente, como les va para ellos en la escuela, como ellos sienten sobre si mismos en la escuela y socialmente, y cuanta tensión ellos sienten. Explicaron este estudio a mi padre(s) o guardián(es) y ellos dijeron que yo podría estar en ello. La única gente que sabrá sobre que digo y hago en el estudio será la gente responsable del estudio.

Me pedirán llenar algunas formas que me serán leídas en voz alta. Las formas harán preguntas sobre si y cuánto traduzco, como siento sobre mí, y sobre si siento la tensión.

Cuando escribo mi nombre en esta página, significa que me leyeron la página y que consiento en estar en el estudio. Sé lo que me pasará. Si decido dejar el estudio, lo único que tengo que hacer es decirlo a la persona responsable.

---

Firma del Niño

---

Fecha

---

Firma de Investigadora

---

Fecha

## Appendix B: Background Questionnaire

### ABOUT ME

1. Age: \_\_\_\_      2. Grade: \_\_\_\_      3. Are you male or female? \_\_\_\_\_

4a. What is your race or ethnicity? (Please check all that apply)

- Latino or Hispanic (Mexican, Mexican American, Cuban, Salvadoran, etc.)
- Asian or Asian American (Chinese, Japanese, Indian, etc.)
- Black or African American
- White or European American
- American Indian or Native American
- Other: \_\_\_\_\_

4b. Please check the country or countries where your family (parents or grandparents) were born:

	United States	Mexico	Cuba	El Salvador	Puerto Rico	Other (write in)
Mother						
Mother's Mother						
Mother's Father						
Father						
Father's Mother						
Father's Father						

5. Were you born in the United States?    Yes       No

**If you checked "No",** how many years have you lived in the United States? \_\_\_\_

6. Which languages do people speak at your home?

Check all that apply, and write in other(s).

- English       Spanish       Other language(s): \_\_\_\_\_

7. What language did you first learn?

- English       Spanish       Spanish and English  
 Another language: \_\_\_\_\_    English and another language: \_\_\_\_\_

8. How well do you speak English?

- Very badly     Not very well       Average       Well       Very well

9. How well do you understand English?

- Very badly    Not very well    Average    Well    Very well

10. How well do you read English?

- Very badly    Not very well    Average    Well    Very well

11. How well do you think your parents speak, understand, read, and write English (please check)?

	<b>Very Badly</b>	<b>Not Very Well</b>	<b>Average</b>	<b>Well</b>	<b>Very Well</b>
Mother: Speak					
Mother: Understand					
Mother: Read					
Mother: Write					
Father: Speak					
Father: Understand					
Father: Read					
Father: Write					

12. If you can speak Spanish, about how much do you use English and Spanish at home?

- Only English  
 Mostly English, a little Spanish  
 About half and half  
 Mostly Spanish, a little English  
 Only Spanish

13.a. Have you ever been in bilingual education (classes taught in English and another language)?  Yes    No

If "Yes", during what grades were you in bilingual education? \_\_\_\_\_

13.b. Have you ever been in ESL (English as a Second Language) classes?

- Yes    No   If "Yes" during what grades were you in ESL? \_\_\_\_\_

14. What were your grades for last six weeks' grading period?

Overall grade point average: \_\_\_\_\_

Math: \_\_\_\_\_

English/Language Arts: \_\_\_\_\_

Science: \_\_\_\_\_

Social Studies: \_\_\_\_\_

15. How many brothers or sisters live at home with you? \_\_\_\_\_

How many older brothers or sisters live at home with you? \_\_\_\_\_

How many younger brothers or sisters live at home with you? \_\_\_\_\_

## SOBRE MÍ

1. Edad: \_\_\_\_ 2. Grado escolar: \_\_\_\_ 3. ¿Eres niño o niña? \_\_\_\_\_

4a. ¿Cuál es tu raza o origen étnico? (Por favor marca todos los que aplican)

- Latino o Hispano (Mexicano, Americano Mexicano, Cubano, Salvadoreño, etc.)
- Asiático o Americano Asiático (Chino, Japonés, Indio, etc.)
- Negro o Americano Africano
- Blanco o Americano Europeo
- Amerindio o Americano Nativo
- Otro: \_\_\_\_\_

4b. Por favor marca el país o países en donde tu familia (padres o abuelos) nacieron:

	Estados Unidos	México	Cuba	El Salvador	Puerto Rico	Otro (Escríbelo):
Mamá						
Mamá de tu mamá						
Padre de tu mamá						
Padre						
Mamá de tu padre						
Padre de tu padre						

5. ¿Naciste en los Estados Unidos?  Sí  No

**Si marcaste “No”, ¿por cuántos años has vivido en los Estados Unidos?\_\_\_\_\_**

6. ¿Qué lenguajes hablan en tu casa? Marca todos que aplican y escribe otro (s) si aplica.

- Inglés  Español  Otro lenguaje(s): \_\_\_\_\_

7. ¿Qué lenguaje aprendiste primero?

- Inglés  Español  Español e Inglés
- Otro lenguaje: \_\_\_\_\_  Inglés y otro lenguaje: \_\_\_\_\_

8. ¿Qué bien hablas el Inglés?

- Muy mal  No muy bien  Ordinario  Bien  Muy bien

9. ¿Qué bien entiendes el Inglés?

- Muy mal  No muy bien  Ordinario  Bien  Muy bien

10. ¿Qué bien lees el Inglés?

- Muy mal    No muy bien    Ordinario    Bien    Muy bien

11. ¿Qué bien piensas que tus padres hablan, entienden, leen, y escriben el Inglés (por favor marque)?

	<b>Muy Mal</b>	<b>No Muy Bien</b>	<b>Ordinario</b>	<b>Bien</b>	<b>Muy Bien</b>
Mamá: Habla					
Mamá: Entiende					
Mamá: Lee					
Mamá: Escribe					
Padre: Habla					
Padre: Entiende					
Padre: Lee					
Padre: Escribe					

12. Si puedes hablar Español, ¿aproximadamente cuánto usas el Inglés y el Español en tu casa?

- Sólo Inglés  
 Generalmente Inglés, y un Poco Español  
 Mitad y Mitad  
 Generalmente Español, y un Poco Inglés  
 Sólo Español

13.a. ¿Alguna vez has recibido educación bilingüe (clases enseñadas en Inglés y otra lenguaje)?

- Sí    No

Si marcaste “Sí”, durante cuales grados estuviste en educación bilingüe? \_\_\_\_\_

13.b. ¿Alguna vez has recibido clases de ESL (Inglés como una Segunda Lengua)?

- Sí    No

Si marcaste “Sí”, durante cuales grados estuviste en ESL? \_\_\_\_\_

14. ¿Qué fueron tus grados por el período anterior de calificaciones de 6 semanas?

Promedio de todas calificaciones: \_\_\_\_\_

Matemáticas: \_\_\_\_\_

Inglés/Artes Lenguajes: \_\_\_\_\_

Ciencias: \_\_\_\_\_

Estudios Sociales: \_\_\_\_\_

15. ¿Cuántos hermanos o hermanas viven en tu hogar contigo? \_\_\_\_\_

¿Cuántos hermanos o hermana mayores viven en tu hogar contigo? \_\_\_\_\_

¿Cuántos hermanos o hermanas menores viven en tu hogar contigo? \_\_\_\_\_

Appendix C: Language Brokering Scale

WHEN I TRANSLATE

1. Do you ever translate (between English and Spanish) for other people?  Yes  No  
 If you answered “Yes”, at what age did you first begin translating for other people? \_\_\_\_\_  
 If you answered “No”, please go on to the next page.

2. Who have you translated for and how often do you translate for them?

Circle how often you translate for each of the following people:

<b>Your mother</b>	Every day	Once a week	Once a month	Once a year	Never
<b>Your father</b>	Every day	Once a week	Once a month	Once a year	Never
<b>A grandparent</b>	Every day	Once a week	Once a month	Once a year	Never
<b>Younger brothers or sisters</b>	Every day	Once a week	Once a month	Once a year	Never
<b>Older brothers or sisters</b>	Every day	Once a week	Once a month	Once a year	Never
<b>Other family</b>	Every day	Once a week	Once a month	Once a year	Never
<b>Teachers</b>	Every day	Once a week	Once a month	Once a year	Never
<b>Friends</b>	Every day	Once a week	Once a month	Once a year	Never
<b>Other people:</b>	Every day	Once a week	Once a month	Once a year	Never

3. Where have you translated? Please circle ALL the places that apply to you.

- a) At home,    b) at school,    c) doctor’s office,    d), dentist’s office,    e) stores  
 f) restaurant,    g) on the street,    h) parent-teacher conferences,    i) post office,  
 j) hospital,    k) bank,    l) government office (for example, Social Security Office),  
 m) where my parents work,    n) church,    o) other places: \_\_\_\_\_.

4. What kinds of things have you translated? Please circle ALL the things that apply to you.

a) Letters, b) homework, c) report cards, d) other school information, e) the mail,

f) bills, g) bank statements, h) legal documents, i) phone calls, j) conversations,

k) television shows, l) movies, m) radio shows, n) the newspaper, o) words,

p) *job applications*, q) *rental contracts*, r) *insurance forms*, s) other stuff:

\_\_\_\_\_.

## CUANDO TRADUZCO

1. ¿Algunas veces traduces (entre el Inglés y el Español) para otras personas?  Sí  No  
 Si respondiste “Sí”, ¿cuántos años tenías cuando comenzaste a traducir para otras personas? \_\_\_\_  
 Si respondiste “No”, por favor sigue a la próxima página.
2. ¿Para quienes has traducido y qué frecuentemente traduces para ellos?  
 Haz un círculo alrededor de la respuesta que indica que frecuentemente traduces para las personas siguientes:

<b>Tu mamá</b>	Cada día	Una vez a la semana	Una vez al mes	Una vez al año	Nunca
<b>Tu padre</b>	Cada día	Una vez a la semana	Una vez al mes	Una vez al año	Nunca
<b>Un abuelo o una abuela</b>	Cada día	Una vez a la semana	Una vez al mes	Una vez al año	Nunca
<b>Hermanos/as menores</b>	Cada día	Una vez a la semana	Una vez al mes	Una vez al año	Nunca
<b>Hermanos/as mayores</b>	Cada día	Una vez a la semana	Una vez al mes	Una vez al año	Nunca
<b>Otros parientes/familia</b>	Cada día	Una vez a la semana	Una vez al mes	Una vez al año	Nunca
<b>Maestros/as</b>	Cada día	Una vez a la semana	Una vez al mes	Una vez al año	Nunca
<b>Amigos</b>	Cada día	Una vez a la semana	Una vez al mes	Una vez al año	Nunca
<b>Otras personas:</b> _____	Cada día	Una vez a la semana	Una vez al mes	Una vez al año	Nunca

3. ¿Dónde has traducido? Por favor haz un círculo alrededor de TODOS los lugares que te aplican.
- a) en la casa,    b) en la escuela,    c) la oficina del doctor,    d) la oficina del dentista,  
 e) tiendas,    f) restaurante,    g) en la calle,    h) conferencias entre padres y maestros,  
 i) el correo,    j) el hospital,    k) el banco,  
 l) una oficina del gobierno (por ejemplo, Oficina de Seguro Social),  
 m) donde mis padres trabajan,    n) la iglesia,    o) otros lugares: \_\_\_\_\_.

4. ¿Qué tipos de cosas has traducido? Por favor, haz un círculo alrededor de TODAS las cosas que te aplican.

a) Cartas, b) tarea de la escuela, c) reportes de calificaciones,

d) otra información de la escuela, e) el correo, f) cuentas,

g) estado de cuenta bancario, h) documentos legales, i) llamadas telefónicas,

j) conversaciones, k) programas en la televisión, l) películas

m) programas en la radio, n) el periódico, o) palabras,

p) aplicaciones para trabajos, q) contratos de alquilar, r) formas de seguros,

s) otras cosas: \_\_\_\_\_.

Appendix D: Academic Self-Efficacy Scale

THE TYPE OF STUDENT I AM

Please circle the box that best describes how much you agree or disagree with each statement.

<b>1. I believe I have the skills to do well in school.</b>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<b>2. I can get good grades this semester.</b>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<b>3. I know how to study to get good grades.</b>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<b>4. The academic knowledge I now have will help.</b>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<b>5. I know that I can pass all my courses this semester.</b>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<b>6. I know I can do at least as well as the average person.</b>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<b>7. So far this semester, I enjoy attending school.</b>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

## EL TIPO DE ESTUDIANTE QUE SOY

Por favor haz un círculo alrededor de la caja que mejor describe cuanto estas en desacuerdo o de acuerdo con cada frase.

<b>1. Creo que tengo las habilidades de salir bien en la escuela.</b>	Muy en desacuerdo	No de acuerdo	Neutral	De acuerdo	Muy de acuerdo
<b>2. Puedo obtener calificaciones buenas este semestre.</b>	Muy en desacuerdo	No de acuerdo	Neutral	De acuerdo	Muy de acuerdo
<b>3. Sé como estudiar para obtener calificaciones buenas.</b>	Muy en desacuerdo	No de acuerdo	Neutral	De acuerdo	Muy de acuerdo
<b>4. El conocimiento académico que tengo ayudará.</b>	Muy en desacuerdo	No de acuerdo	Neutral	De acuerdo	Muy de acuerdo
<b>5. Sé que puedo pasar todos mis cursos este semestre.</b>	Muy en desacuerdo	No de acuerdo	Neutral	De acuerdo	Muy de acuerdo
<b>6. Sé que puedo salir tan bien como la persona típica.</b>	Muy en desacuerdo	No de acuerdo	Neutral	De acuerdo	Muy de acuerdo
<b>7. Hasta ahora en el semestre, me gusta de asistir a la escuela.</b>	Muy en desacuerdo	No de acuerdo	Neutral	De acuerdo	Muy de acuerdo

Appendix E: Social Self-Efficacy Scale

MAKING FRIENDS

Pease circle a number to show how easy or hard it is for you to do each of the following:

<b>1. Start a conversation with a boy or girl who you don't know very well.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>2. Express your opinion to a group of kids talking about something that interests you.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>3. Join a group of kids in the school cafeteria for lunch.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>4. Work on a project with a student you don't know very well.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>5. Help make a new student feel comfortable with your group of friends.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>6. Share with a group of kids an interesting experience you once had.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>7. Put yourself in a new and different social situation.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>8. Volunteer to help organize a school dance.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>9. Ask a group of kids who are planning to go to a movie if you can join them.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>10. Stand up for yourself when someone accuses you of doing something you didn't do.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7

<b>11. Get invited to a party that's being given by one of the most popular kids in the class.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>12. Keep up your side of the conversation.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>13. Be involved in group activities.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>14. Find someone to hang out with during breaks between classes.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>15. Wear the kind of clothes you like even if they are different from what others wear.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>16. In a line-up, tell a student who pushes in front of you to wait his or her turn.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>17. Stand up for yourself when another kid in your class makes fun of you.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>18. Help a student who is visiting your school for a short time to have fun.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>19. Join a school club or sports team.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>20. Express your feelings to another kid.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>21. Ask someone over to your house on a Saturday.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7

<b>22. Ask someone to go to a school dance or movie with you.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>23. Go to a party where you are sure you won't know any of the kids.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>24. Ask another student for help when you need it.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7
<b>25. Make friends with kids your age.</b>	Impossible to do 1	2	3	4	5	6	Extremely easy to do 7

## HACIENDO AMIGOS

Por favor haz un círculo alrededor de un número para indicar que fácil o difícil es para ti hacer cada uno de lo siguiente:

<b>1. Comenzar una conversación con un niño o una niña que no conoces muy bien.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>2. Expresar tu opinión a un grupo de chavos hablando de un tema que te interesa.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>3. Juntarte con un grupo de niños en la cafetería escolar para el almuerzo del mediodía.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>4. Trabajar en un proyecto con un estudiante que no conoces muy bien.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>5. Ayudar a un estudiante nuevo sentirse cómodo con tu grupo de amigos.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>6. Compartir con un grupo de niños una experiencia interesante que tuviste alguna vez.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>7. Ponerte en una situación social nueva y diferente.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>8. Ayudar o ser voluntario/a en la organización de un baile de la escuela.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>9. Pedirle a un grupo de niños que está planeando una salida al cine si puedes ir con ellos.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>10. Defenderte en cuanto a tus derechos cuando alguien te acusa de haber hecho algo que no hiciste.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7

<b>11. Recibir una invitación a una fiesta de uno de los niños más populares de la clase.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>12. Mantener tu lado de una conversación.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>13. Ser incluido en actividades de grupo.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>14. Encontrar alguien con quien pasar tiempo durante recreos entre clases.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>15. Vestirte del tipo de ropa que te gusta aún si es diferente de como los otros se visten.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>16. En una cola, si un estudiante empuja para ponerse enfrente de ti, decirle que se espere hasta que le toca su turno.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>17. Defenderte cuando otro niño en tu clase se burla de ti.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>18. Ayudarle a un estudiante que está visitando tu escuela por poco tiempo que tenga experiencias divertidas e interesantes.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>19. Unirte con un club escolar o equipo de deportes.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>20. Comunicar tus sentimientos con otro niño.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7

<b>21. Invitarle a alguien que venga a tu casa en un sábado.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>22. Invitarle a alguien que te acompañe a un baile de la escuela o al cine.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>23. Ir a una fiesta en donde estás seguro de que no vas a conocer a ningunos de los niños.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>24. Pedirle a otro estudiante que te ayude cuando lo necesitas.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7
<b>25. Hacer amistades con niños de tu edad.</b>	Imposible hacer 1	2	3	4	5	6	Sumamente fácil hacer 7

## Appendix F: Acculturative Stress Scale

### WHEN I FEEL STRESSED

Please read the following statements. First, decide if each applies to you—that is, whether or not it is a problem for you. Then, if it is a problem for you, tell how much it bothers you by circling the number using one of the following choices:

0	1	2	3	4	5
Doesn't Apply	Doesn't Bother Me	Almost Never Bothers Me	Sometimes Bothers Me	Often Bothers Me	Bothers Me a Lot

<b>1. I feel bad when others make jokes about people who are in the same group as me.</b>	0	1	2	3	4	5
<b>2. It's hard for me to talk to new kids.</b>	0	1	2	3	4	5
<b>3. I have more things that get in my way than most people do.</b>	0	1	2	3	4	5
<b>4. It bothers me that people in my family who I am close to don't understand the things that I think are important, that are new to them.</b>	0	1	2	3	4	5
<b>5. People in my family who I am close to have plans for when I grow up that I don't like.</b>	0	1	2	3	4	5
<b>6. It bothers me when someone in my family is very sick.</b>	0	1	2	3	4	5
<b>7. It bothers me when my parents argue.</b>	0	1	2	3	4	5
<b>8. It's hard for me to tell my friends how I really feel.</b>	0	1	2	3	4	5
<b>9. I don't have any close friends.</b>	0	1	2	3	4	5
<b>10. It's hard for me to ask questions in class.</b>	0	1	2	3	4	5
<b>11. I worry about what other kids think about me.</b>	0	1	2	3	4	5

<b>12. Many people believe certain things about the way people in my group are and they treat me as if those things are true.</b>	0	1	2	3	4	5
<b>13. I worry about having to take tests in school.</b>	0	1	2	3	4	5
<b>14. I don't feel at home here in the United States.</b>	0	1	2	3	4	5
<b>15. People think I am shy, when I really just have trouble speaking English.</b>	0	1	2	3	4	5
<b>16. I worry about being sick.</b>	0	1	2	3	4	5
<b>17. The thought of my family and I moving to a new place bothers me.</b>	0	1	2	3	4	5
<b>18. I often feel that people purposely try to stop me from getting better at something.</b>	0	1	2	3	4	5
<b>19. I worry that other kids won't like me.</b>	0	1	2	3	4	5
<b>20. It bothers me when people force me to be like everyone else.</b>	0	1	2	3	4	5
<b>21. I worry that other kids are making fun of me.</b>	0	1	2	3	4	5
<b>22. I often feel like people who are supposed to help are really not paying any attention to me.</b>	0	1	2	3	4	5
<b>23. It bothers me when I am not with my family.</b>	0	1	2	3	4	5
<b>24. Because of the group I am in, I don't get the grades I deserve.</b>	0	1	2	3	4	5
<b>25. It bothers me when I argue with my brother/sister.</b>	0	1	2	3	4	5
<b>26. I worry about getting my report card.</b>	0	1	2	3	4	5
<b>27. It bothers me that I have an accent.</b>	0	1	2	3	4	5
<b>28. It's hard to be away from the country I used to live in.</b>	0	1	2	3	4	5
<b>29. I think a lot about my group and its culture.</b>	0	1	2	3	4	5

<b>30. It bothers me when some countries of the world don't get along.</b>	0	1	2	3	4	5
<b>31. It's hard to talk with my teacher.</b>	0	1	2	3	4	5
<b>32. Because of the group I am in, I feel others don't include me in some of the things they do, games they play, etc.</b>	0	1	2	3	4	5
<b>33. It's hard for me to "show off" my family.</b>	0	1	2	3	4	5
<b>34. People think badly of me if I celebrate holidays or I do the "special things" of my group.</b>	0	1	2	3	4	5
<b>35. I have a hard time understanding what others say when they speak.</b>	0	1	2	3	4	5
<b>36. I worry about having enough money.</b>	0	1	2	3	4	5

## CUANDO SIENTO ESTRÉS

Por favor, lee las frases siguientes. Primero, decide si la frase te aplica o no--es decir, si la frase es un problema para ti o no. Luego, si es un problema para ti, quiero que me digas cuanto te molesta. Haz un círculo alrededor del número que corresponde, usando las opciones siguientes:

0	1	2	3	4	5
No aplica	No me molesta	Casi nunca me molesta	A veces me molesta	Frecuentemente me molesta	Me molesta mucho

<b>1. Me siento mal cuando otros hacen chistes sobre las personas que están en el mismo grupo que yo.</b>	0	1	2	3	4	5
<b>2. Es difícil para mi hablar con niños nuevos.</b>	0	1	2	3	4	5
<b>3. Tengo más cosas que me causan problemas que la otra gente.</b>	0	1	2	3	4	5
<b>4. Me molesta que las personas de mi familia con quien soy muy unido no entienden las cosas que pienso que son importantes, las cosas que son nuevas para ellas.</b>	0	1	2	3	4	5
<b>5. La gente de mi familia con quien soy unido tiene planes para mi cuando yo crezca que no me gustan.</b>	0	1	2	3	4	5
<b>6. Me molesta cuando alguien en mi familia está muy enfermo.</b>	0	1	2	3	4	5
<b>7. Me molesta cuando mis padres tienen discusiones.</b>	0	1	2	3	4	5
<b>8. Es difícil para mi contarles a mis amigos como realmente me siento.</b>	0	1	2	3	4	5
<b>9. No tengo ningunos amigos íntimos.</b>	0	1	2	3	4	5
<b>10. Es difícil para mi hacer preguntas en la clase.</b>	0	1	2	3	4	5
<b>11. Me preocupo de lo que los otros niños piensan de mi.</b>	0	1	2	3	4	5

<b>12. Muchas personas creen ciertas cosas sobre como las personas en mi grupo se portan, piensan, o son, y me tratan como si esas cosas fueran verdaderas.</b>	0	1	2	3	4	5
<b>13. Me preocupo de tener exámenes en la escuela.</b>	0	1	2	3	4	5
<b>14. No me siento como en mi casa aquí en los Estados Unidos.</b>	0	1	2	3	4	5
<b>15. La gente piensa que soy tímido, pero en realidad sólo tengo dificultad en hablar el Inglés.</b>	0	1	2	3	4	5
<b>16. Me preocupo de estar enfermo.</b>	0	1	2	3	4	5
<b>17. Me molesta pensar en que mi familia y yo nos mudemos a un lugar nuevo.</b>	0	1	2	3	4	5
<b>18. A menudo siento que la gente trata a propósito de prevenir que yo me mejore en algo.</b>	0	1	2	3	4	5
<b>19. Me preocupo de que no les voy a agradar a los otros niños.</b>	0	1	2	3	4	5
<b>20. Me molesta cuando la gente me obliga ser como todo el resto del mundo.</b>	0	1	2	3	4	5
<b>21. Me preocupo de que los otros niños se están burlando de mí.</b>	0	1	2	3	4	5
<b>22. Frecuentemente siento como las personas que deben ayudar realmente no me están prestando atención ninguna.</b>	0	1	2	3	4	5
<b>23. Me molesta cuando no estoy con mi familia.</b>	0	1	2	3	4	5
<b>24. A causa de ser parte de mi grupo, no recibo las calificaciones que merezco.</b>	0	1	2	3	4	5
<b>25. Me molesta cuando discuto con mi hermano/hermana.</b>	0	1	2	3	4	5
<b>26. Me preocupo de recibir mi reporte de calificaciones.</b>	0	1	2	3	4	5
<b>27. Me molesta que tengo acento.</b>	0	1	2	3	4	5
<b>28. Es difícil estar lejos del país en que vivía antes.</b>	0	1	2	3	4	5

<b>29. Pienso mucho en mi grupo y en su cultura.</b>	0	1	2	3	4	5
<b>30. Me molesta cuando algunos de los países del mundo no se lleven bien.</b>	0	1	2	3	4	5
<b>31. Es difícil hablar con mi maestro/maestra.</b>	0	1	2	3	4	5
<b>32. A causa de ser parte de mi grupo, siento que los otros no me incluyen en algunas de las cosas que hacen, sus juegos, etc.</b>	0	1	2	3	4	5
<b>33. Es difícil para mí hacer resaltar a mi familia.</b>	0	1	2	3	4	5
<b>34. La gente piensa mal de mí si practico costumbres o hago las “cosas especiales” de mi grupo.</b>	0	1	2	3	4	5
<b>35. Tengo dificultad en entender lo que otros dicen cuando hablan.</b>	0	1	2	3	4	5
<b>36. Me preocupo de tener suficiente dinero.</b>	0	1	2	3	4	5

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## VITA

Sara Louise Tedford was born in Dallas, Texas and raised in Richardson, Texas. After graduating from Berkner High School in Richardson, Texas, she entered Pomona College in Claremont, California. She received the degree of Bachelor of Arts in Latin American Studies from Pomona College in May, 1996. During the following years she worked in the travel and finance industries and volunteered extensively with high school foreign exchange students. In September, 2003, she entered the School Psychology program in the Department of Educational Psychology at The University of Texas at Austin. She received the degree of Master of Arts in Educational Psychology from the University of Texas at Austin in May, 2007. In August, 2009, she completed her clinical internship at the Child and Family Guidance Center in Northridge, California, where she frequently conducted therapy with immigrant parents and their children.

Permanent Address: 11816 Barrington Way, Austin, TX 78759

This dissertation was typed by the author.