

ABSTRACT

Title of Document: AFFECTIVE AND EXPERIENTIAL INFLUENCES ON
ENGLISH SKILLS OF HERITAGE SPANISH
SPEAKERS

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As the Hispanic population in the United States increases, English language education for Hispanic students becomes a vital issue. Numerous factors can affect an individual's acquisition of a second language. This study analyzed the effects of media exposure to, interaction in, and valorization of English on the English skills of heritage Spanish speaking fifth grade students at an elementary school in Maryland. This mixed-methods study incorporated a unique combination of observation, surveys, interviews, and a language assessment test to understand the problem. The analyses revealed that media exposure, productive interaction, and the students' internal valorization of English produced no significant correlation with English proficiency. However, productive interaction and external valorization from parents resulted in a negative correlation with English proficiency.

AFFECTIVE AND EXPERIENTIAL INFLUENCES ON ENGLISH
SKILLS OF HERITAGE SPANISH SPEAKERS

Team GABS: Grammar Acquisition in Bilingual Students

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1. INTRODUCTION

1.1 Background

As the population of the United States becomes increasingly diverse in terms of race, ethnicity, language, and nationality, cultural assimilation and acculturation become extremely important. Native residents of the country adapt to changing environments around them, and the immigrants have to adjust to a new environment. One of the most critical components of this adjustment is the language. After having spent many years speaking their native language, the immigrants—specifically children—face strong pressure to learn English. Their ability to learn English is often a vital determinant of whether they survive and thrive in the United States. Learning English is especially important for the younger members of these immigrant families who are still in the language development stages of their lives. Understanding the gravity of the issue, we decided to explore this issue in further detail for the largest minority population in the United States, Hispanics. We use the term Hispanic in this study, as the United States Census Bureau does, to mean people who identified their origin to be Mexican, Puerto Rican, Cuban, Central or South American, or some other Hispanic origin (Bureau, 1993).

According to the United States Census Bureau, the Hispanic population in the United States in 2006 was 44.3 million, 14.8% of the total population in the United States. This was a 24.3% increase from 2000, almost four times the 6.1% growth rate of the total population. The Washington, D.C. metropolitan area has been an exceptional region for this growth. In the state of Maryland, the growth of the Hispanic population from 2000 to 2006 was 46.4% (Bureau, September 21, 2009), while the total population increased by only 6.0% (Maryland Department of Planning, 2007).

Much of this growth has been fueled by recent immigration. Of the United States Hispanic population in 2006, a staggering 40% were foreign-born (Bureau, September 21, 2009). In 2005, 78% of the Hispanic population spoke a language other than English in the home (Bureau, September 21, 2009). Thus, many of the Hispanic residents in the United States are foreign-born or first-generation Americans and speak Spanish natively. The recent influx of Spanish-speaking immigrants has led to an increase in the likelihood of interaction between English and Spanish speakers. Due to this increase in language contact, understanding the process of language learning is more important than ever.

Exploring the language learning of Hispanic students, we discovered some troubling trends in the performance of the students on English skills assessments. Statistics published by the National Center for Education Statistics show that Hispanic students consistently performed below average in the area of English reading. In 2004, the average reading score of 9-year-old Hispanic students on the National Assessment of Educational Progress was 205, on a scale from 0 to 500, while the average score of all students was 219 (Table 1). When the same assessment was conducted with 13- and 17-year-old students, Hispanic students scored 17 and 21 points below the average, respectively (Table 1). Additionally, in 2005, 54% of fourth-grade Hispanic students performed at the lowest level (“below basic”) on the reading section of the National Assessment of Educational Progress (Table 2). By comparison, only 36% of all students performed at this level. The gaps for eighth- and twelfth-grade students are similar (Table 2). A clear trend of underperformance in English reading among Hispanic students is apparent through these statistics.

Since English is the primary language of education in most public schools in the

United States, this trend of underperformance is a major area of concern. Academic success depends upon a solid foundation in English. Weaker English reading skills of the Hispanic students seem to be related to their general academic underperformance. In 2005, 41.5% of Hispanics aged 25 and above did not complete high school, compared to 9.9% of Caucasians and 18.5% of African-Americans (Table 3). Furthermore, this educational disparity carried over to the professional world, where median earnings in 2005 for all Hispanic males and females aged 25 and above were 22.5% and 20.6% lower, respectively, than for all ethnic groups combined (Table 4).

To understand the causes of these disparities, we explored several factors that disproportionately affect the English proficiency of Hispanic students. Since the Hispanic students in the United States attending public schools are exposed to English in the school, we focused our attention on bilingual Hispanic students. Here we define bilingualism as the "alternate use of two or more languages by the same individual" (Wei, 2000). Our study's participants all fit Wei's definition of bilingualism because they use English and Spanish alternately, and are considered Spanish-English bilinguals. These students may use Spanish and English in different degrees, varying from speaking to reading to writing. Furthermore, they are considered to be heritage Spanish speakers within this Hispanic bilingual community. A large proportion of the Hispanic community consists of first-generation Americans. Hence, they and their children learned Spanish in their native country before emigrating and at home in the United States. In the United States, bilinguals who learned Spanish in their childhood at home and are exposed to English at school and in professional environments are considered to be heritage Spanish speakers ("National Heritage Language Resource Center," 2010).

In the effort to understand the effects of various factors on the English proficiency of heritage Spanish speakers, we initially investigated two major groups of factors: internal and external factors. “Internal factors” include those that encompass the affective state of individual students (i.e. affecting the students from within). By contrast, “external factors” include influences from the surrounding environment that affect the English proficiency of the students. “English skills” are defined in this study as a student’s ability to comprehend spoken and written English and produce written English as measured by the Language Assessment Scales (LAS) Links Assessment, a standardized assessment that “accurately evaluate[s] reading, writing, listening, speaking, and comprehension skills¹ of English language learners” (McGraw-Hill, 2009).

Below is a more detailed description of the internal and external factors that may be affecting the English language skills of the students, based on previous research in fields such as social psychology, education, and second language acquisition.

1.1.1 *Internal Factors*

Internal factors include the affective state of the students. The way people view themselves can affect the extent to which they acquire a second language (L2) (Brown, 2000). If a person identifies himself or herself to be from the country with the L2 as the dominant language, the person is likely to have a higher proficiency in the L2 compared to a person who identifies himself to be from the country of his first language (L1). For example, a person from Mexico who self-identifies as Mexican-American versus Mexican is predicted to have better proficiency in English (Lambert, Just, & Segalowitz, 1970; Rumbaut, 1994). Self-identification with a country indicates a desire to assimilate

¹ For the purposes of this analysis we will use the words “skills” and “proficiency” interchangeably.

into the culture, including the country's language. Hence, Spanish-speaking students' ethno-linguistic identity is an important internal factor that affects their English language skills.

In addition, a language learner's "willingness to communicate" is often important to the learner's proficiency in a L2 (MacIntyre, Clement, Dornyei, & Noels, 1998). Defining willingness to communicate as the "predisposition toward approaching or avoiding the initiation of communication," McCroskey proposed a scale to measure this characteristic. This scale depends on variables such as introversion, apprehension, alienation, and self-concept (McCroskey, 1992). Each of these variables influences the English skills of language learners.

Some other internal factors that affect L2 learning include attitude, anxiety, self-esteem, and motivation in relation to the L2 (Guilloteaux & Dornyei, 2008; Hamers & Blanc, 2004; Wei, 2000). An attitude toward a language is a personal view or opinion of the language; an example of this is valuing English as the language of the professional world. Anxiety includes apprehension about speaking a language. Self-esteem reflects a person's evaluation of his or her ability to communicate. An individual may be motivated to speak a language in order to assimilate into a society or to gain professional success. Attitudes toward English, and levels of anxiety, self-esteem, and motivation in relation to English could all affect the English skills of the heritage Spanish-speaking population.

1.1.2 *External Factors*

External factors, on the other hand, originate from the environment surrounding the language learner. For example, the amount, type, and context of language input

inside and outside of school affect the proficiency of the students in the L2 (Pearson, 2007). Additionally, simultaneous bilinguals, early sequential bilinguals, and late sequential bilinguals all have significantly different language outcomes (Conboy & Thal, 2006; Schoonbaert, Hartsuiker, & Pickering, 2007; Sebastián-Gallés, Echeverría, & Bosch, 2005). Thus, the age at the time of initial exposure to the L2 affects long-term attainment of proficiency in the L2.

In addition to influences related to external exposure to the L2, influences on a learner's language identity can also affect his or her L2 skills. Speakers of multiple languages often identify more strongly with one language, known as their language identity (Dabene, 2002). This language identity can be affected by the amount, type, quality, and context of exposure to the L2 compared to the L1 both at home and at school. The amount and type of exposure affect the value the language learner places on the L2 compared to the L1. This influences attitudes and motivation toward learning the L2, which affect the proficiency in the L2 (Hamers & Blanc, 2004).

Exposure to various forms of media is another external factor that contributes to language skills. This includes exposure to written materials such as books, newspapers, and magazines, as well as to television and the Internet. Mackey (2000) discovered that exposure to mass media is often helpful in becoming bilingual and maintaining bilingualism (Wei, 2000). In addition, if speakers of multiple languages only have access to media in one language, their ability to listen, read, and write in the other language may be hindered. Mass media in written form is everywhere in our society. Pearson (2007) found that literacy in a particular language enhances language skills, despite the fact that it is not necessary for spoken language skills.

Additionally, instructional, social, and parental influences affect language learning. Lower socio-economic status (SES) often negatively affects children's language learning and proficiency in English (Goldstein, 2004). Parents' involvement with their child's education also affects the child's academic performance. Greater parental involvement has been shown to be correlated with superior academic performance, including language learning (Goldstein, 2004). Therefore, SES and parental influence are important factors that might be affecting Hispanic students' English language skills.

In addition to parental involvement with the child's education, parental and societal valorization of the L2 affects the child's proficiency in the L2 (Hamers & Blanc, 2004; Sostre Rodríguez, 2005; Lightbown & Spada, 1999). If a child's parents value the second language, they are bound to encourage the child to learn the language, and the child associates positively with the language. Due to this encouragement, the child's desire to learn the language increases and the child tends to develop better language skills. Similarly, if a society looks highly upon a particular language, the child will learn to associate positively with society's preferred language and will develop a higher proficiency in that language.

Finally, the school's performance, condition, and instructional approaches are also significant influences on second language learning (Bacherman, 2007; Guilloteaux & Dornyei, 2008; Reese, Goldenberg, & Saunders, 2006; Lightbown & Spada, 1999). For example, teaching methods such as immersion programs or English Second Language (ESL) programs affect the second language proficiency of the students (Bacherman, 2007; Reese, et al., 2006). Hence, external and experiential factors that include those

related and unrelated to language can affect the second language proficiency of language learners.

1.2 *Focus of our Study*

Understanding previous studies, we narrowed the focus of our research to three sets of factors: language attitudes and identity, media exposure, and language interaction. Within language attitudes, we consider both the language learner's attitude toward English and the external environment's attitude toward English. The internal aspect of this factor encompasses sub-factors such as the language learner's confidence in relation to English, comfort level when speaking English, motivation to learn English, and perception of the value and importance of English. On the other hand, the external environment's attitude toward English includes factors such as society's majority and minority language, parents' belief in the importance and value of English, and the encouragement or pressure from parents, teachers, and friends to learn English.

In addition, we also look to understand the effects of exposure to different forms of Spanish and English media on the English skills of the students. We did not assess the amount of exposure to different forms of media. Assuming that a student is exposed to media, our focus is to identify whether that media is in English or Spanish. The different forms of media we include are newspapers, movies, books, and magazines. In addition, we define exposure as the availability of media to the students. We are not measuring whether the students actually take advantage of media available to them.

The final major factor we decided to consider in our research is interaction. Interaction includes both receptive and productive interaction (one-way and two-way communication, respectively) between the student and the people around them, including

family, friends, teachers, etc. Here we look to understand the effects of variation in amount, type, and language of interaction on the English skills of the students.

1.2.1 Research Questions and Hypothesis

Our research question is: How do language attitudes and identity, media exposure, and interaction affect the English language proficiency of heritage Spanish-speaking elementary-school students in Maryland public schools in the Washington, D.C. metropolitan area?

In pursuit of the answer, we are addressing the following sub-questions:

- What is the relationship between students' attitudes toward English and their English skills?
- What is the relationship between students' parents' attitudes toward English and students' English skills?
- What is the relationship between the way students identify themselves linguistically and culturally and their English skills?
- What is the relationship between heritage Spanish-speaking students' exposure to different forms of English media and their English skills?
- What is the relationship between heritage Spanish-speaking students' productive and receptive interaction in English in various settings and their English skills?

Some of the settings to consider include:

- Parent or home
- Teacher or school
- Friends or community

Based on an analysis of the previous research on second language acquisition and

learner factors, we expect to discover that positive attitudes toward English will increase the students' desire to learn English, which will lead to superior English skills. Similarly, if the students' parents have a positive attitude toward English, the student will be encouraged to learn English and the result will be superior English skills. Furthermore, if the students identify themselves to be from the United States or to be bilingual speakers rather than Spanish speakers, they will have a higher proficiency in English. In addition, we expect that greater availability of English media will be related to better English skills. Finally, greater interaction in English in all settings should be related to superior English skills.

1.2.2 Setting and Context for the Study

The setting of our study is a natural classroom environment involving two classes of fifth-grade students at an elementary school in Prince George's County, Maryland. Fifth-grade students serve as an ideal group for our study because they have had exposure to both English and Spanish in their formative years of language learning. As a result, data collected in relation to them provides us with a much better understanding of the language learning process. In addition, they are mature enough to reflect on their own language development, language attitudes, and language-related factors in their community.

We narrowed our focus to one elementary school with a very high proportion of heritage Spanish speakers. The demographic breakdown for the school is as follows: 82.1% Hispanic, 14.6% Black, 2.3% Asian/Pacific Islander, 0.8% White, and 0.2% American Indian ("Langley Park/McCormick Elementary School - Hyattsville, Maryland Schools," 2010). Additionally, the students at this school have consistently

underperformed in reading, as compared to the state average according to the Maryland State Assessment ("Langley Park/McCormick Elementary School - Hyattsville, Maryland Schools," 2010). Due to the demographics and the relatively poor performance in reading, we feel that this population provides a great opportunity both to advance understanding of the problem at hand and possibly make recommendations for improvement in English education for the students.

1.2.3 Purpose of the Study

English language education of heritage Spanish speakers is a major issue in today's society. Our goal is to continue the advancement of the knowledge about second language education for heritage Spanish speakers. Through analysis of a combination of factors, we are adding a new dimension to the existing research that has primarily focused on isolating the effects of individual factors on English skills. Additionally, our use of a mixed methods study provides a holistic understanding of the different factors affecting the students.

In addition, we wanted to make a positive impact on our focus school. With a very high number of heritage Spanish speakers and many students with low scores on reading assessments, the school provided us with a great setting for our project. As we learned about the students and the community, we realized that if we discovered interesting relationships between the factors and the English skills, we could help the students by making suggestions for curriculum enhancement. In addition, seeing the tough situation families, the community, and the school faced, we felt we could also help them through fundraisers.

In order to learn about the student population and the surrounding community, we

met with the principal of the school. During this meeting, she communicated that the primary language used by students' families at home is Spanish. Also, many of the students' parents have limited formal education in either English or Spanish.

Additionally, a vast majority of households within this community fall below the poverty line. According to the principal, many children return home from school to empty households because their parents work long hours or multiple jobs to support their families. Due to the low socio-economic status, the limited presence of parents at home, and the exposure to potential harmful influences in the community, such as gangs, many students face significant hurdles in their pursuit of academic achievement.

Inspired by the power of education and its ability to break down existing barriers such as language and socioeconomic status and to allow individuals to pursue successes not available to their parents, we are interested in understanding the relationships between children's home and school environments and their English language skills. We hope to improve our understanding of the forces that shape the language proficiencies of these students.

1.3 *Methodology*

In order to study this problem, we conducted a mixed-method study, employing both quantitative and qualitative data collection methods. The quantitative data enabled us to measure the students' degree of English proficiency and to quantify the effects of the factors we are studying. Quantified data was then analyzed using statistical tests looking for correlations between language skills and the factors affecting them.

However, quantitative data alone is not sufficient because it does not provide a deep understanding of the environment affecting the students. As a result, qualitative data

complements our quantitative analysis, giving our subjects the opportunity to express, in detail, their thoughts regarding their views, motivations, attitudes, and experiences.

Specifically, our testing instruments include a language assessment test, surveys, and one-on-one interviews. Through this combination of instruments, we gain a clear picture of how certain factors interact to affect the English language skills of these Spanish-speaking students.

1.3.1 *Surveys*

We have created surveys to acquire information from the students, the teachers, and the parents/guardians of the students about the students' English and Spanish media exposure, interaction, attitudes, and identity. The surveys help us understand the specific internal and external factors influencing the students. The surveys have both quantitative questions, many of which use Likert scales, and qualitative, open-ended questions requiring reflection.

1.3.2 *Interviews*

While the surveys help us gain a basic understanding of the internal and external factors, we gain a deeper, more thorough understanding of students' English language skills, motivations for learning English, and attitudes toward Spanish and English through one-on-one interviews with a subset of our participants. Students who volunteer to have an interview have a brief, informal, semi-structured conversation with a proctor. The interview is primarily composed of follow-up questions relating to the survey.

1.3.3 *Tests*

The English language skills of the student subjects are tested through the use of the LAS Links Assessment for fourth- and fifth-grade students. This test measures the

students' reading, writing, and listening skills in English. We included all of these skill sets because they are all academically and professionally essential, and together they give a more complete, inclusive portrait of the students' language skills. We omitted the speaking portion of the test due to logistical constraints. The test quantifies the students' English skills, the only dependent variable we are considering.

1.4 *Significance of the Study*

Research in second language education has led to the development of numerous theories regarding second language education and learning. The existing research has served as groundwork for us as we have developed our research study. We add two aspects to the existing knowledge about second language learning. First, studies conducted in the past have focused on the effects of a few individual factors on the development of the second language skills of the students. Second, the research has primarily concentrated on the analysis of the main effects of an individual factor. We feel that in a classroom setting or real-world interaction, the level of proficiency a person develops in the second language is a result of the interaction of numerous factors. As a result, our study aims to analyze many different factors' influence on the second language proficiency.

In addition, existing research usually adopts either a qualitative or a quantitative methodological framework. The quantitative framework is extremely beneficial for extracting patterns out of large amounts of aggregate data. In the field of second language learning specifically, quantitative analyses are important for understanding the relationship between specific factors and the development of specific second language (L2) skills. On the other hand, in an environment where students are often judged on test

scores alone, qualitative analysis is valuable for developing a deeper understanding of the subjects' internal experience of such factors. Although less precise, qualitative analysis is extremely beneficial for discovering issues and factors that the researcher might not have initially considered.

Combining both quantitative and qualitative analysis is extremely useful. Addressing the issue of second language learning through only one kind of methodology does not provide a comprehensive understanding of the effects of particular factors on second language learning. As a result, we have designed a mixed methodology framework that combines the quantitative and qualitative data collection and analysis. Based on this integrated approach, we add a significant amount of knowledge to the existing research in the field of second language learning.

1.5 *Limitations*

As with all such investigations, there were inherent limitations to this research project. While the students at this elementary school represent an important population for such a study, the size of this population is small. As a result, we were not able to generalize our findings to the ESL population at large. Strictly speaking, all of the findings that we conclude are true only for the specific participants we have tested and examined.

In the process of understanding the effects of the factors on the English skills of heritage Spanish speakers, we interviewed the students to gain a more in-depth understanding of interesting phenomena observed in the survey and test results. These interviews presented several major limitations. Since the students are only in fifth grade, some of them were not able to express their thoughts to us in a clear and coherent

manner. Additionally, age and cultural barriers also affected the results. All interviewers are older than the students interviewed, thus the interviewer-interviewee age gap may have caused some interviewees to be apprehensive. Finally, since none of the interviewers are Hispanic, cultural barriers could have also affected the results of the interviews.

1.6 *Summary*

The underperformance of Hispanic students in reading relative to their peers led us to investigate sociolinguistic factors that affect heritage Spanish speaking students in an English-speaking school environment. The significance of this issue is magnified by the rapidly increasing Hispanic population. In order to contribute to the existing literature on this topic, we examine the factors that may influence English language skills. We hypothesize that a set of internal and external factors such as language attitudes and identity, and media exposure and interaction at school and at home are related to Spanish-speaking students' English proficiency. To test this hypothesis, we focus on fifth-grade students at an elementary school in Prince George's County, Maryland and employ surveys, interviews, and quantitative English language tests. Using a combination of quantitative and qualitative data, we analyze the correlations between these factors and the English language skills of the subjects. Though our study has some limitations, such as low sample size, difficulty in isolating individual factors, and the youth of the subjects, it has the potential to further the knowledge concerning bilingualism in heritage Spanish speaking students in the United States.

2. LITERATURE REVIEW

2.1 *Introduction*

In light of the importance of this issue, numerous studies have been conducted regarding the effects of various affective and experiential factors on the English skills of bilingual students. Reviewing the prior literature – drawn from the fields of sociolinguistics, social psychology, general education, special education, and second language acquisition, including both interactionist and sociocultural approaches – provided us with an understanding of the established frameworks in these fields of study and also enabled us to identify areas where we can expand on the existing research. The prior literature has led us to our final objective of analyzing the effects of language attitudes and identity, media exposure, and interaction on the English language proficiency of heritage Spanish speaking elementary-school-aged students. Our study intends to expand upon existing research by analyzing not only the effects of individual factors, but also the effects of the interactions of the factors on the English skills of the students. We have reviewed literature from social psychology, general education, special education, and second language acquisition, and research done from interactionist and sociocultural approaches. Through this analysis, we hope to gain the most holistic understanding of the situations faced by the heritage Spanish speakers.

Before delving into the details of this particular project, it is important to understand some well-established concepts that serve as the foundation for this project.

2.2 *Language Learning and Bilingualism*

Too often when discussing the speakers of two different languages, speakers are divided into three categories: monolingual in the L1, bilingual, and monolingual in the

L2. Bilingualism is far more complex than this three-tiered system. Hamers and Blanc discuss “bilinguality,” the psychological state of an individual with access to more than one linguistic code. Bilinguality is multidimensional in that it spans across several psychological and sociological dimensions. Hamers and Blanc (2004) identify these dimensions as (1) relative competence, (2) cognitive organization, (3) age of acquisition, (4) exogeneity, (5) social cultural status, and (6) cultural identity. These dimensions, when separated and analyzed, allow researchers to understand the individual phenomena that occur as a result of exposure to more than one linguistic code.

Competence accounts for the relative proficiency in each language. A distinction is made between the balanced bilingual who has equivalent competence in both L1 and L2 and the dominant bilingual, whose competence in one of the languages, often the mother tongue, surpasses that of the other (Hamers & Blanc, 2004). Balance does not necessarily imply equal skill or the ability to utilize both languages in all similar situations.

Cognitive organization refers to the contexts in which a bilingual associates his or her language proficiency. Compound bilinguality implies that the speaker associates words and phrases in both of his or her languages with the same concept. Coordinate bilinguality, on the other hand, implies that the speaker will have two different representations for two like concepts in L1 and L2. A speaker who has learned both languages from childhood is more likely to demonstrate compound bilinguality (Hamers & Blanc, 2004).

The age of acquisition affects the cognitive organization as well as other aspects of a bilingual’s development (Hamers & Blanc, 2004). Distinctions are made between

childhood bilinguality, adolescent bilinguality, and adult bilinguality. In the case of childhood bilinguality, two languages are learned from birth, thus two mother tongues are present, referred to as simultaneous bilinguality (Hamers & Blanc, 2004). Sometimes, a second language is learned following the acquisition of a mother tongue; this is referred to as consecutive bilinguality (Hamers & Blanc, 2004).

The presence or absence of a language in the child's speech communities is referred to as either endogenous or exogenous bilinguality (Hamers & Blanc, 2004). An endogenous language is one that is used as a mother tongue in a community and may or may not be used for official purposes. An exogenous language, on the other hand, is a language that is used in a formal, institutional setting, but not in the community of the group using it officially.

The statuses of the two languages are very important to a speaker's bilinguality (Hamers & Blanc, 2004). If two languages are sufficiently valued, a child will benefit from the use of both, granting him or her greater ability and linguistic flexibility than his or her monolingual counterparts (Hamers & Blanc, 2004). Conversely, in an environment in which a child's mother tongue is devalued, his or her cognitive development may be delayed relative to his or her monolingual peers (Hamers & Blanc, 2004). These situations are referred to as additive and subtractive bilinguality, respectively.

Finally, bilinguals can be separated by their cultural identity. A bilingual may identify positively with the two cultural groups that speak his languages and be received as a member of both groups, making him or her bicultural. A bilingual may be bicultural with varying degrees of proficiency in both languages. Similarly, a bilingual may be a

fluent bilingual, while maintaining monocultural identity. Bilingual development may also cause a bilingual to renounce the culture of his mother tongue, becoming an L2-acculturated bilingual (Hamers & Blanc, 2004). The various dimensions of bilinguality can be found in Table 5.

As we attempt to answer our main research question, we need to analyze the direct linguistic effect of prior Spanish language knowledge on the English language learning process of the student participants. Previous research reveals that age of initial L2 exposure significantly affects L2 proficiency, as well as the ability to transfer knowledge of one language to another. Schoonbaert, Hartsuiker, and Pickering (2007) demonstrated that bilinguals have a single, unified lexical-syntactic system – a mental system organizing word meanings and grammatical structures – with stronger connections from L1 words to concepts than from L2 words to concepts (Schoonbaert, Hartsuiker, & Pickering, 2007). Conboy and Thal (2006) may seem to contradict this finding, however, as they determined that simultaneous bilingual children – those who acquire two languages at the same time from birth – do not learn any faster than monolingual children. Thus, they concluded that “bootstrapping” across languages – i.e., transferring grammatical concepts – does not occur, with children acquiring both languages at similar rates in parallel. However, these findings may not actually be in conflict; the study by Schoonbaert, Hartsuiker, and Pickering (2007) tested late sequential bilinguals – those who learn a second language significantly later than their first – who likely had much greater awareness of their knowledge of language, known as metalinguistic awareness, when beginning to study their second language. It is possible that transference between languages is possible only after learning a first language

(Schoonbaert, et al., 2007).

Furthermore, Sebastián-Gallés, Echeverría, and Bosch (2005) found that early sequential bilinguals are better than simultaneous bilinguals in their first language, but simultaneous bilinguals outperform early sequential bilinguals in the second language (Sebastián-Gallés, Echeverría, & Bosch, 2005). The categories of simultaneous, early sequential, and late sequential, which group bilinguals by age of initial exposure to L2, constituted one of the major factors we examined. Our research examined the relationship between such factors and the students' English skills.

2.3 *Factors*

We have divided our factors into the following sections: identity, motivation and attitudes, media exposure, and interaction.

2.3.1 *Identity*

A language learner's social and ethnolinguistic identity often have been observed to play an important role in development of second language skills. An individual's identity is the construction of the self and is derived from group membership. The characteristics and skills he develops are dependent on the group to which the individual belongs. If the individual does not positively view the elements related to a particular group, the individual will try to change group membership to the group with the desired elements (Tajfel, 1974).

The concept of social identity was further expanded to ethnolinguistic identity by Giles and Johnson (1981) who focused on language as the salient marker of group membership and social identity. Giles and Johnson also noted that, in the case where the individuals compare their own social group to out-groups, they try to identify if the

comparison is positive or negative (Giles & Johnson, 1981). If the comparison is negative, the individuals try to achieve a more positive social identity and behave according the behavioral patterns of groups they find more desirable (Le Page, 1968; Le Page & Tabouret-Keller, 1985). According to Le Page, individuals take such an action if the following hold true:

- i) They can identify the groups;
- ii) They have adequate access to the groups and ability to analyze behavioral patterns;
- iii) They have a powerful motivation to join the groups and are being reinforced by the groups; and
- iv) They have the ability to modify their behavior.

Several factors affect the groups with which individuals identify. One of the most important factors is family background (Hansen & Liu, 1997). Maternal language – the language of child-directed speech of the mother – is a good predictor of the language with which a speaker identifies and the language the speaker uses more often. This holds true even for simultaneous bilinguals, who have had extensive exposure to two languages since birth (Sebastián-Gallés, et al., 2005).

Another important factor is the individual's identification with his ethnicity. In a diverse society, if an individual's ethnicity is not possessed by other groups, the ethnicity is a salient group characteristic (Hamers & Blanc, 2004). Within ethnic groups, language is often vital to express identity and membership to the particular group. Sometimes strong identification with an ethnic affiliation can affect the language skills in the second language being learned (Gatbonton, Trofimovich, & Magid, 2005). Thus, if the student

participants see native-like English pronunciation as a threat to their ethnic affiliation due to the power relationship of English and Spanish, strong identification with a Spanish-speaking ethnicity may be an obstacle to English learning.

In other situations when individuals positively identify with an outgroup, individuals often linguistically adapt, leading sometimes to subtractive bilingualism or language erosion (Hansen & Liu, 1997). Subtractive bilingualism involves “valuing, learning, and developing competences in the second language at the expense of the first language” (Hamers & Blanc, 2004).

Individuals also sometimes portray different identities in different settings to assimilate into different groups. Fuller (2007) supported this through classroom observation and quantitative analysis of recorded small-group interaction. She determined that bilingual students chose whether to speak English or Spanish based on a multitude of social factors (Fuller, 2007). For instance, two students, who were highly proficient in both English and Spanish, code-switched often with each other to identify as bilingual, but they consistently used English, the prestige code in the school, when they wanted to identify as good students. Another student used Spanish to declare his Mexican identity.

Similar results were discovered by Blom and Gumperz (1972) in their study conducted in Hemnesberget, Norway. Most of the members in the community spoke two varieties of Norwegian, a local dialect and a standard dialect. When speaking within the local community, the residents project their local identity by using the local dialect. On the other hand, they would use the standard dialect when interacting with individuals from other communities. In addition, even within the local community, the standard

dialect was used for all academic purposes as all education was carried out in the standard dialect (Wei, 2000). Thus, the language learner's proficiencies in both the first and second language are affected by the learner's perception, beliefs and values.

The relation between the social and ethnolinguistic identity and the language proficiency has been deeply researched, and researchers have found correlations between positive ethnolinguistic identity and language proficiency. Lambert, Just, & Segalowitz (1970) found correlations between the cultural allegiance of Franco-Louisianians and their relative proficiencies in English and French (Lambert, Just, & Segalowitz, 1970). In a 1994 study conducted in Canada, Hamers found that students who attain a high level of multilingualism viewed themselves to be multicultural compared to the students who were monolingual (Hamers & Blanc, 2004).

Rumbaut (1994) conducted a study with over 5,000 children of immigrants of numerous ethnic groups (Mexicans, Cubans, Colombians, Jamaicans, Asians, etc.) in California and Florida. He discovered that the subjects who preferred English and were fluent in English were more likely to identify themselves to be American and not from their country of origin. The ones who were more fluent in the heritage language (Spanish, Chinese, etc.) more often identified themselves to be from their origin country. Finally, the bilinguals tended to use the hyphenated Americans (Mexican-American) to identify themselves (Rumbaut, 1994).

Researchers have identified a few cases where a group member achieves a native-like competence in L2 (Hamers & Blanc, 2004):

- i. If he identifies weakly with his own cultural group or does not consider his cultural identity to be dependent on language

- ii. If he perceives there are no alternatives to the inferior social status of his cultural group
- iii. If he perceives the vitality of his own group as low compared with that of the dominant group whose language he is acquiring
- iv. If he perceives that social-group mobility is easy, i.e., he can easily ‘pass’ from one social group to another
- v. If he identifies more strongly with social categories other than language and culture, e.g., profession

While all these studies have demonstrated the existence of a clear relationship between the identity and the language proficiency, the direction of the relationship is still uncertain. Identifying with particular group and language could be a driving force behind the increased interest in learning the language and the subsequent development of proficiency. On the other hand, high proficiency in a particular language could possibly lead to positive identification with the group using the language. Guimond & Palmer (1993) conducted a study of Anglophone officer-cadets who received mandatory training in French. In their study, they discovered that failure to achieve a high level of proficiency in French negatively affected the officer-cadets’ attitudes toward Francophones. The students blamed the out-group for their failure (Guimond & Palmer, 1993).

2.3.2 *Motivation and Attitudes*

In addition to identity, motivation and attitude of the language learner also relate to the learner’s proficiency in the language (Wei, 2000). The relation between motivation and attitude on language learning and the actual effect is debated heavily in the linguistic

research community. While some believe that positive attitude and motivation lead to better skills in the target language, the belief that the person has a positive attitude toward learning the language because of his previous success with the language also holds credibility (McGroarty, 1996; Spada & Lightbown, 1999).

Attitude includes cognitive, affective, and conative components. In simpler terms, attitude encompasses the beliefs, values, emotional reactions, and behavioral tendencies of a person toward the target of the attitude. The attitude to a great extent determines the choices a person makes toward the object (Gardner, 1985). If a person has a positive attitude toward a particular goal and believes that achieving the goal will be valuable, the person has a higher tendency to take strong actions toward achieving that particular goal (Gardner, Lalonde, & Moorcroft, 1985).

Motivation includes the combination of desire and effort made to achieve the particular goal (McGroarty, 1996). In second language learning, motivation is based on two factors: need for communication and attitudes. If communication in the second language is necessary, the learner will have a strong motivation to learn the language (Spada & Lightbown, 1999). De Houwer (2007) discovered that when a child needs to know a particular language to communicate with his parents, he or she had a higher level of motivation to use the language and, as a result, attained a higher level of proficiency in that language (De Houwer, 2007).

In addition, a positive attitude toward the second language and the language community in general leads to an increased desire to learn and increased contact with speakers of the language (Lightbown & Spada, 2006). A study by Masgoret and Gardner (2003) examined the relationship between a learner's attitudes toward a second language

and success in learning the second language. The study concluded that positive attitudes and motivations are correlated with a greater willingness to learn a second language (Masgoret and Gardner, 2003). It is difficult to prove that having a positive attitude and motivation leads to success in the language as these factors and the impact they have are extremely difficult to quantify. It is believed, though, that the increased willingness to learn a language will contribute to better language skills (Lightbown and Spada, 2006).

While our goal is to better understand the relationship between attitude and language skills, an important initial step is to identify ways to differentiate between positive and negative attitude toward a language. Since the beliefs and values of the person are important components of the attitude, in the context of language learning, valorization of a particular language is an essential subject to study. Valorization involves attributing positive values to the use of particular language as a functional tool (Hamers & Blanc, 2004). As one considers attitudes, and specifically valorization within attitudes, important are not only the internal beliefs and values of an individual but also the beliefs and values of the society and the acquaintances of the person. If society places high value on a particular language, then the individual will have a positive attitude toward the language and will have a desire to learn the language.

Valorization of a second language (L2) is an important factor in the L2 proficiency of bilinguals. A study by Maritza Sostre Rodriguez (2005) analyzes valorization, self-efficacy, and metalinguistic awareness in basic ESL students at the University of Puerto Rico. Through qualitative analysis of student reflections, Sostre Rodriguez (2005) explores the what and how of English language learning. She states that the processes of language valorization and the construction of metalinguistic

awareness served as “the scaffold that moved students to L2 learning.” The importance that students placed in both L2 (English) and L2 interactions affected their overall L2 proficiency (Sostre Rodríguez, 2005).

Societal valorization of a particular language relative to other languages also plays a major role in determining an individual’s valorization of a particular language. Within a society or community, a majority and a minority language exist. The majority language is the standard and official language used by the majority of the population, and the minority language is usually used as a mode of interaction by a minority of the population. If a society does not valorize the minority language, the speakers of that language will tend to shift to the majority language (Hamers & Blanc, 2004). On the other hand, if the minority language is accepted and encouraged, such a shift will not occur.

The power relationship between the majority and minority language is extremely important in determining the attitude and motivation of the language learner toward a language. Heritage Spanish speakers in the United States are members of a minority group and are looking to learn a majority language. Their attitude will probably differ from the attitude of those from the majority group trying to learn the majority or even the minority language (Spada & Lightbown, 1999).

Fuller (2007) describes the different types of sociolinguistic attitudes. In Fuller’s study, the majority language of the community and mainstream education was English, whereas the group of Spanish speakers studied was the minority ethnic group. Depending on the proficiency of the speaker studied, the students were able to cross between mainstream American culture and their Mexican heritage repeatedly (Fuller,

2007).

Although motivation is a significant factor in second language learning, a power imbalance between English and Spanish may render high motivation insufficient for English learning. Norton Peirce (1995) argues that the spectrum of integrative and instrumental motivation does not fully encompass the complexity of motivation, language learning, and power, and that even highly motivated second language learners are sometimes hesitant to speak and practice their second language due to a power imbalance, resulting in lower English proficiency.

In addition to societal valorization, familial and parental valorization is also important. As a child develops language, he must valorize the language (Hamers & Blanc, 2004). As the adults around the child valorize the language for particular functions, the child will also valorize the language for those functions. The child's parents and family attach values with language, and the child internalizes those values.

Based on all the external and internal influences, the individual's valorization of the language shapes his attitude and motivation in relation to the language. Since attitude and values are often difficult to quantify, many researchers have had a significant amount of trouble quantitatively analyzing the relationship of these attitudes to the language proficiency of an individual.

In past studies, various efforts have been made to quantify motivation and attitude. Gardner and Lambert (1959, 1972) have directly measured the attitudes and motivation using self-report questionnaires including opinion question on a Likert-type scale of 5 to 7 points. In the study, which was conducted in Canada, Gardner and Lambert asked their subjects to rate their reactions to English-Canadians, French-

Canadians, and French people in France on scales such as Bad to Good, Dumb to Smart, etc. The results indicated that the respondents perceived the proficiency of the speakers differently based on the language being spoken even though all the speakers were bilinguals in each of the languages. This displayed the difference in the respondents' attitude toward the particular language (McGroarty, 1996). Another method used is the "matched guise" technique where the subjects listened to audio samples of individuals speaking French and English and rated the audio on affective and cognitive qualities. The rating was done on a scale very similar to the Likert scale.

Motivation has been researched in even more detail involving the effects of different types of motivation on language proficiency. In a study conducted by Gardner & Lambert (1972), the effects of internal motivation, coming from within the individual, and external motivation, based on the individual's perception of the potential rewards of achieving a particular goal were compared.

2.3.3 *Media Exposure*

Media exposure was one of the primary factors we examined, as prior research suggests access to media strongly contributes to skill in a language. Media exposure includes exposure to literature, in the form of books, magazines, newspapers, and other written materials at home and at school, as well as television, movies, Internet, and games. In this study, we do not focus on the amount of exposure to different forms of media. Assuming that a student is exposed to media, our focus is on whether the exposure is in English or Spanish. We define exposure as the availability of media around the students, not the extent to which they take advantage of the media available to them. The student participants in our study have access to English reading materials at

school, and we expected that the students who had exposure to English reading materials at home would score higher on the English reading test than those with Spanish reading materials at home. Similarly, other types of media exposure in English, such as television, radio, and movies, may improve English listening skills.

Although literacy is not necessary for acquisition of a spoken language, it enhances language skills (Pearson, 2007). Exposure to written media, books or other forms of mass media can help to develop skills in a language, even when a child is not exposed to frequent input in that language (Pearson, 2007). Reading skills help to maintain proficiency in a language, especially for older children and adults (Pearson, 2007). Along with increasing proficiency and helping to retain a language, reading skills in English allow for more educational and employment opportunities. Learning to read and write in early childhood prepares students for their future academic success. Literate adults in the United States, in general, make more money and are more successful than those who do not know how to read and write (Bialystok, 2005).

Mackey (2000) found that exposure to mass media is helpful in becoming bilingual and for maintaining bilingualism. It is possible for an individual to use media exposure as the primary factor in maintaining a language, especially if it is a minority language. For adults, sometimes written media is the only exposure a person has to a second language (Wei, 2000).

A study by Brenneman, Morris, and Israelian (2007), looks at the relationship between language preference and reading skills in English and Spanish. In their study, Spanish-English bilingual elementary school students were given a reading skills assessment. Students with a preference for English media and communication had better

reading skills in English. This shows that bilingual children's preference for a language may be correlated with greater English language use and reading skills (Brenneman et al, 2007). In our study, we built off of this research by examining the relationship between students' language skills and their exposure to media.

According to Cobo-Lewis, Eilers, Pearson, and Umbel (2002), reading ability in a first language helps to build reading skills for a second language. In their study, young students were provided with written materials in either one or two languages. Children who were provided with written materials in both English and Spanish and learned to read both languages scored significantly higher in reading in each language than their monolingual counterparts (Cobo-Lewis et al, 2002). This demonstrates that bilingual children do not have to learn the basic process of reading twice. Once they have learned it, they must simply adapt their skills to a different spelling system (Pearson, 2007).

Another study examined the effect of English-language or home-language storybooks at home combined with English instruction at school on preschoolers' English vocabulary acquisition (Roberts, 2008). This study found that preschool children learning English as a second language experienced a growth in English proficiency and English vocabulary when they read books in either their first language or in English, when combined with English instruction in school (Roberts, 2008). This suggests that exposure to media in either English or another language enhances language learning, as long as children are also receiving instruction in English.

In a 2005 study, Bialystok, Luk, and Kwan examined the relationship between the language skills of bilinguals and the writing systems that they were learning. The bilingual children in this study were learning to read in two languages, and these children

had greater language skills than monolingual children. Children who were learning to read in two languages with two different writing systems had the greatest advantage in their language skills. Bilingual children only transferred literacy skills between two languages when both languages used the same writing systems (Bialystok et al, 2005). In our study, the two relevant languages are Spanish and English, which use the same writing system.

Reading ability and access to other types of media in a language are important for the development of language skills. These skills enhance language skills in general. Numerous studies have focused on the relationship between different types of exposure to media and different types of language skills. In our study, we are looking for a direct correlation between the language of media exposure and writing and comprehension skills in English. We predict that access to English language media in the home will improve English language skills.

2.3.4 *Interaction*

Interaction in English and Spanish, both at home and at school, was another major factor in our study. Interaction is direct linguistic input and output between individuals. For this study, interaction includes both productive, conversational interaction and receptive language exposure.

The importance of conversational interaction for first language learning can be seen in the case study of (Sachs, Bard, & Johnson, 1981) a hearing child of deaf parents who did not use sign language with him. Jim's only source of linguistic input until age 3 years and 9 months was television. Jim spoke only with unusual, ungrammatical word order until he began having conversational sessions with an adult. Within five months,

his speech was markedly more grammatical and typical of his age. Several researchers, notably Hatch (1978), Long (1983, 1996), Pica (1994) and Gass (1997), argue that conversational interaction is necessary but not sufficient for second language acquisition. Long's (1996) Interaction Hypothesis states that conversational interaction promotes language acquisition because speakers modify their speech to make themselves comprehensible, and comprehensible input is key to language acquisition. Hoff (2006) presents significant support for the idea that communicative experience, i.e. conversational interaction, is critical to language development.

The amount of receptive interaction (called input) a young second language learner receives is the largest factor that parents and communities can control; it is necessary for language learning and higher amounts of it are necessary to achieve a basic comfort level (Pearson, 2007). In a society with a majority and a minority language, it is especially important to have interaction in the minority language in order to become bilingual (Pearson, 2007). The language of the mother, the language of the father, the language of the community, and the language of the peer group are all factors that have an effect on the language skills of a child (Pearson, 2007). DeHouwer (2007) corroborates the idea that interaction at home, both productive and receptive, is a major factor in whether a child in a potentially bilingual environment will fully acquire both languages (De Houwer, 2007). We gauged these factors through child and parent surveys as well as interviews. These factors encompass both types of interaction we are considering.

The Time-on-Task Hypothesis (Porter, 1990; Rosenshine & Berliner, 1978) states that the amount of language exposure in a language is predictive of how well students

will benefit from instruction in that language. Gutierrez-Clellen and Kreiter (2003) raised questions about this hypothesis with their finding that English (L2) exposure did not relate to the English language skills they tested, though Spanish (L1) exposure was positively correlated with Spanish language skills. However, the researchers only included students in their study if they had at least three years of exposure to the language tested (Gutierrez-Clellen & Kreiter, 2003). Although ours is only an exploratory study, it includes students with a wider variation in number of years exposed to both languages. Additionally, Gutierrez-Clellen and Kreiter (2003) tested the students for grammatical errors in narratives the students produced based on storybooks; our language test is different in several ways, including that we do not ask students to produce spoken language (Gutierrez-Clellen & Kreiter, 2003).

Past research has shown that interaction between expert and novice speakers produces a collaborative effort toward language learning and idea exchange (Watanabe & Swain, 2007). Interaction between passive and dominant speakers, however, proves to have an unequal contribution of language use, and not much collaboration occurs (Watanabe & Swain, 2007). Watanabe and Swain also found that learners with a higher proficiency scored higher on the test when paired with a lower proficiency learner. Overall, Watanabe and Swain found that when peers of different proficiency levels work together, there is a benefit to the students. Our population generally has English-language interaction at school and Spanish-language interaction at home and in the community (Watanabe & Swain, 2007). It was important to have a quantitative measure of this interaction to gauge the effects of Spanish and English interaction at home and at school. We expected that the students with more interaction in both English and Spanish

would have higher English proficiency.

In addition to the three main factors that we are studying in our research, several other factors have been observed to have an effect on the language skills of second language learners. We kept all these factors and concept in mind when we conducted our research.

2.3.5 *Socioeconomic Status, Academic, and Nonacademic Factors*

Both academic and nonacademic external factors affect the L2 skills of language learners. When L1 is the dominant language in a society, L2 development in immersion schools does not negatively affect L1 skills. This is known as additive bilingualism. However, whenever L2 is the dominant language, meaning L1 has minority language status, L1 proficiency does decrease, in a process known as subtractive bilingualism (Chand, 2006). These two trends imply that exposure to something outside the classroom—whether language input or societal influence—is a significant factor in language retention (Bae, 2007).

The students' socioeconomic status (SES) also seems to play a role in the L2 development of the students. Hammer, Miccio, and Rodriguez (2004) theorized that lower SES causes anxiety and low self-esteem in parents, which negatively affects their child's language-learning (Goldstein, 2004). This theory was supported when Cobo-Lewis, Oller, and Pearson (2007) found that test scores were skewed in favor of students with a higher socioeconomic status on vocabulary and phonics inventories. Another factor related to SES arises from parental influences on language learning. Lambert and Taylor (1996) found that working-class mothers encouraged their children to learn English so they could succeed in America, especially in school, whereas middle-class

mothers defined success as Spanish language competence (Lambert & Taylor, 1996). We considered our population to be working-class and expected English skills to be encouraged by the families of the students. SES is not a primary factor in our research, as it is consistently low in the population we studied, with 94% of community members living at or below the poverty line, according to the principal. Hence, we were not able to make conclusions about SES during our research, but we considered it as a background factor to contextualize our population.

2.3.6 *Language Education*

Hammer, Miccio and Rodriguez (2004) theorized that greater parental involvement in the educational language-learning process better aids children in doing well in school, including learning the language (Goldstein, 2004). Similarly, Figueroa (1993) found parent involvement to have a significant effect on academic achievement and language acquisition for students with non-English backgrounds in U.S. schools (Figueroa, 1993). We considered parental involvement in a student's education as another external factor affecting the student's English language skills.

Furthermore, school curricula and language instruction were also important factors in our research. Previous second language acquisition research has examined second language education to identify successful language instruction programs and effective teaching methods. Language programs offered in U.S. public schools for students learning English include English immersion, developmental bilingual, and dual language programs. Some research suggests that immersion programs better educate students in the target language than the other two programs (Reese, et al., 2006). This conclusion is based on the finding that among K-12 students of all three program types,

only those in English immersion programs scored higher on an English literacy test than on a parallel Spanish-literacy test; all other students scored higher on the Spanish test, indicating that Spanish remained their dominant language (Reese, et al., 2006). However, other studies have found that integration of the first language into the instruction of the second language does not lead to more diluted results than second-language-only education (Bacherman, 2007).

Alternatively, one study found that alternative language instruction programs compared with total immersion may be more effective as they consider a student's success in all academic areas, not just in language acquisition. The researchers found that rigorous coursework should be taught in the native language rather than the target language, because teachers tended to reduce the content level of material so students with limited L2 comprehension could understand it. Allowing teachers to teach difficult material in L1 helps students excel in areas without being affected by a language barrier (Pousada, 2000). Hence, it is important for us to consider the effect of language programs on the students' English language skills.

Additionally, according to interviews with students conducted by other researchers, language program is not the only predictor of student success (Pousada, 2000). College-aged students in Puerto Rico described positive teacher qualities and methods as deciding factors in their English competence, especially in a community where some of their peers perceived English as a foreign language forced upon native Spanish speakers. The students claimed that teachers were better able to help their students if they were able to communicate with the students in literate and oral forms of both Spanish and English. Also, teacher motivation, passion, and use of English in

nonacademic manners helped the students better appreciate the utility of English and feel more excited toward learning it (Pousada, 2000). Hence, teacher qualities and teaching methods are two more external factors we kept in mind when analyzing the effects of various factors on students' English language skills.

Research has further suggested that alternative forms of evaluation also affect students' English language skills. For example, one study found that a Writer's Workshop, a standardized form of measuring students' writing abilities, promoted the fourth-grade bilingual students' enjoyment of the writing process by allowing students to draw from their multilingual experience (Serna, 2005). The value of maintaining native culture and language skills was a sentiment common in other studies as well. Students feel more inclined to learn a second language if they are reassured their own culture and language will not be lost (Pousada, 2000; Serna, 2005). During our research we considered the effects of the different forms of evaluation on students' English language skills.

2.4 *Relation to our Study*

In our classroom observations, we took note of the student language choices as they related to friendships, classroom roles, and the language of instruction. This allowed us to gain a deep understanding of students' language choices from a constructivist approach. Additionally, we observed the overall language learning environment that the classroom provided.

It was important that we acquired information regarding language inputs from outside of the school as prior research indicates that a language program is not the only predictor of student success (Pousada, 2000). Additionally, parental involvement was

found to be very important (Goldstein, 2004). To address these concerns, we designed a study that would incorporate many realms in which the language learner interacts.

Questions about language identity in our surveys and interviews also informed our interpretations of students' language choices in school and at home. At the same time, we are mindful that many factors other than desired linguistic and social identity--such as group membership, situation, formality-informality, equality-inequality, topic, and domain--affect students' language choice (Wei, 2000).

2.5 *Summary*

Previous research corroborates our hypothesis that English and Spanish language skills need not interfere with each other. Furthermore, research suggests that media accessibility, interaction and attitudes in both Spanish and English, as well as sociolinguistic identity, are significant factors in heritage Spanish speakers' development of English language skills. In the past, researchers have effectively used questionnaires, interviews, tests, and observation to assess language skills and other factors. With the shortcomings of previous research in mind, we developed our own unique questionnaires and used a standardized English language test as a benchmark to discover the effects of the following factors: media accessibility, interactions, attitudes, and identity on English language skills.

3. METHODOLOGY

3.1 *Introduction*

In order to gain an understanding of the effects of different factors affecting the students, we conducted a mixed-methods study, collecting both quantitative and qualitative data through tests, surveys, and interviews. The surveys and interviews that included a combination of quantitative and qualitative questions helped us obtain data about and understand the internal and external factors affecting Spanish-speaking students. The specific factors we inquired about include the students' language attitudes and identity in relation to English, exposure to different forms of media in English, and interactions with others around them in English. The language assessment test provided us a quantitative measure of the English skills of the students.

With the two sets of data, we analyzed the relation between the factors mentioned above and the English language skills of the students. We analyzed the quantitative data using bi-variate correlation and linear regression analysis. In addition, we coded the qualitative data for specific information about the background environment of Spanish-speaking students. This information provided context to the results obtained through quantitative analysis.

3.1.1 *Assumptions of the Research*

While developing our methodological framework for this research study, we moved ahead with some basic assumptions. We assumed that the internal and external factors that we are testing affect the participants of the study and that variance in the factors is related to the English language skills of the participants (Brown, 2000). In addition, we assumed that we can accurately measure language skills using a pre-

existing battery. The LAS Links test is a reputable assessment for measuring language skills, thus fulfilling this requirement. Additionally, we assumed that the students we tested do not have any learning disabilities that prevent them from comprehending information at a grade-appropriate level. Students with learning disabilities are provided individualized attention in a separate classroom ("Special Education," 2010). This assumption allowed us to exclude additional variables that arise from testing students with learning disabilities. Keeping these assumptions in mind, we developed a comprehensive research study to address our research questions.

3.1.2 *Study Design*

Our research question required us to collect two major sources of data: students' English language skills, and the internal and external factors affecting the students. The factors we specifically looked to understand are language attitudes and identity, media exposure, and interaction in English and Spanish. These factors were assessed quantitatively using questionnaires. In addition, we obtained qualitative data using open-ended questions on the questionnaires and interviews with the students. The quantitative data allowed us to gain insight about the relation of the factors to the English skills of the students, and the qualitative data enabled us to gain a deeper understanding about the presence and effects of the factors being tested.

The second major set of data was English language skills. English language proficiency in reading, writing, and listening was measured quantitatively using the LAS Links Assessment. Since our study attempts to understand the relation between the factors and English skills of the students, it was important to complete all steps of the data collection almost concurrently. By doing so, we avoided the worry of accounting

for changes in the factors affecting the students and changes in the English skills of the students. Due to time constraints, we could not implement a pre-test/post-test design for this study.

3.1.3 *Participants*

The primary participants of this research study are the students from an elementary school in Prince George's County, Maryland, United States of America. When deciding on the setting for our study, we considered several factors including the age of the subjects, the demographic breakdown of the students, the proximity of the school, and the willingness of the county to allow university studies to be conducted in the schools.

After considering several factors, we chose to focus our study on fifth-grade students. These students are mature enough to complete our surveys and interviews and to reflect on their linguistic ability. Hence, we felt that the data collected through the surveys, interviews, and tests would be valuable and meaningful. In addition, the fifth-grade students were exposed to both English and Spanish in their formative years, so they have the potential to develop native-like proficiency in both languages. We also considered a popular phenomenon called the "Fourth grade slump" (Meichenbaum & Biemiller, 1998). This phenomenon refers to a drop off in literacy, specifically in reading comprehension between the third and fifth grades.

This across-the-board struggle in the later stages of elementary school provides an excellent opportunity to explore English language skills. Using this population one can examine whether any of the aforementioned factors (media exposure, interactions, etc.) help prevent this achievement gap in elementary school students. Additionally, it

provides an opportunity to explore achievement differences between native English speakers, heritage Spanish speakers, bilinguals, and other classifications based on language.

Focusing on fifth-grade students, we narrowed our search of schools to only elementary schools. We also knew that we wanted a school with a large population of heritage Spanish speaking students. We researched the demographic breakdown of all elementary schools in Maryland and Virginia and developed a spreadsheet to help us sort through the massive list. Schools with less than 50% Hispanic students were removed from the list of prospective schools. Of the remaining schools, we had several schools from Prince George's County and Montgomery County. All Montgomery County schools were also removed from the list of prospective schools as we discovered that the county was very reluctant to allow university projects to be conducted in their schools. However, Prince George's County was extremely supportive of such measures. Within Prince George's county, we found a school with a population that is more than 80% Hispanic. The school fit all the criteria for our project and we decided to approach the school for our project.

In order to be allowed to study the students, we had a detailed discussion about our project and goals with the principal of the school. Based on the thorough description of this study, the principal approved the project, granting us access to both sections of the fifth-grade class. Overall, this included a group of about 54 students. English is the language of instruction in this school, and the students are taught English through a Language Arts course.

In addition to the students, their parents and two fifth-grade teachers completed

surveys to provide insight into the use of both Spanish and English in the home and school domains. Fourteen parents completed and returned surveys with signed consent forms to participate in the study, a response rate of 25.9%. A total of 15 students participated in our study. All students were heritage Spanish speakers. Some students that were not heritage Spanish speakers did fill out the consent form and took the test. These students were not included in the sample population for the purposes of this study.

3.2 *Classroom Observations*

In order to gain insight about the environment surrounding the students, we conducted six classroom observation visits. The classroom observation visits were conducted by six members of the research team. Classroom observations primarily served two functions. First, it allowed the students to acclimate to our presence. This reduced apprehension that might have otherwise prevented students from participating in our study. Classroom observations also provided a qualitative view of the classroom environment. During these observations, we were able to take note of the students' language choice during various interactions, students' ability and tendency to switch from English to Spanish and vice versa (code-switching), students' motivation level, teaching methods employed in the classroom, and the general attitude toward English and Spanish in the classroom. This qualitative information helped us gain a better understanding of language attitudes and interactions, two of the main factors that are the independent variables for our study.

Classroom observations have been used effectively in the past for similar studies. In Shenk's (2008) article "Choosing Spanish," the author observed students' language choice during different activities and interactions, and their ability to switch between

English and Spanish, using audio and video recorded data on 35 weeks of classroom instruction. Additionally, she was able to monitor the English skills of the different students. As mentioned earlier, one of the factors about which we collected data is students' language choice. Reading through Shenk's (2008) methodology and her success with classroom observations encouraged us as we solidified our methodology.

One specific aspect of Shenk's (2008) methodology that we adapted to our study was the observation of both unstructured student interaction and structured classroom interaction. During her study, Shenk (2008) discovered that the students' language choice differed based on the situation. For example, during unstructured student interaction, when the teacher is not present, Shenk (2008) noticed, "Spanish was sometimes spoken, but only in small groupings of [native Spanish speakers]." During student-directed classroom interaction, in which the students would work together and share ideas to complete an assignment, Shenk (2008) noticed that the interactions were mostly in English. Identifying such differences is also important for us to understand the factors that lead to the use of a particular language and how the use of that language in different situations affects the English skills of the students.

Building on the methodology used by Shenk (2008), we developed our own classroom observation methodology that fit our research goals. We coordinated the classroom observations with one of the fifth-grade teachers so that we were able to observe Reading/English classes. Observing the Reading/English classes enabled us to gain insight about the dependent variable, the English language skills of the participants, in addition to the independent variables mentioned earlier.

The reading and language arts classes were taught every day of the week between

10:00 a.m. and 11:00 a.m. Two members of our group observed the class for the 30 minutes between 10:00 a.m. and 10:30 a.m. on every day of the week. The observations spanned three weeks, so that we could notice trends in the behavior, language choice, and interactions of the students. Other than brief introductions at the beginning of the initial observation sessions, the observers remained silent and did not interrupt any classroom interactions during the three weeks.

To prepare for the classroom observations, we developed a note-taking guide to make the observation process efficient and effective. The guide consisted of six categories: Environment, Teaching Methods, Student Language Choice, Code Switching, Student-Student Interactions, and Motivation (Appendix F). Each category was important in determining the nature of language use in the classroom. Members of the team brought a copy of the guide to each observation session and made notations under each heading, being as specific as possible. Three observation sessions occurred per week over the span of two weeks, for a total of 6 observations. Two team members attended every observation session. By following this protocol, the team collected detailed information about both the independent and dependent variables. We compared the notes of each member in order to check for consistent observations after each visit.

3.3 *Surveys*

In addition to classroom observations, we collected data about the factors affecting the students through surveys we created. These surveys were carefully reviewed and approved by the Institutional Review Board (IRB) of the University of Maryland, College Park. The surveys were important to gain a deep understanding of the demographics of the participants, their exposure to and use of English across various

domains, and their surrounding environment. In order to obtain this information, the surveys were composed of demographic, behavioral, and attitudinal questions (Appendix A, Appendix B, Appendix C). The combination of these questions allowed us to understand who our participants are, what interactions they are involved in, and what environmental influences they are exposed to every day. Since surveys used in prior studies did not match the needs of our study, we created new surveys. While we understood the kind of information we were trying to obtain from the subjects, we did not have a well-developed understanding of how to phrase the questions, what answer choices to provide, what scale to use for our responses, etc. Since Gutiérrez-Clellen and Kreiter (2003) had used surveys very effectively in their study we used their surveys to guide us during the survey creation process.

In addition to surveys of the two fifth-grade teachers, we developed two sets of surveys: a student survey (Appendix B) and a parent survey (Appendix A). Both surveys were sent home in the students' weekly "take-home folders" by the teachers with an attached note. The parent survey was printed in both Spanish and English, while the student survey was printed in English only. The questions in both sets of surveys were divided into five categories: one-way interaction, two-way interaction, media exposure, internal valorization, and external valorization. One-way interaction questions gauge the language directed at and surrounding the student. Two-way interaction questions address back-and-forth discussions between the student and an interlocutor, whether a friend, family member, or other community member. Media exposure questions gauge the impact of various forms of language inputs—both print and non-print—on the student. Internal valorization questions address the student's attitudes and their effects on

language development. External valorization questions are similar, but focus on the student's family and surrounding community. The division of the questions by survey can be found below in Table 6.

Gutiérrez-Clellen and Kreiter's study also inspired us to create surveys for the parents and teachers. They identified that "parent and teacher reports can be reliable sources for obtaining L2 acquisition histories and language profiles [since] these informants have observed the child in a variety of linguistic contexts over long periods of time" (Gutierrez-Clellen & Kreiter, 2003).

We expected each survey to take about 20-30 minutes to complete. For the quantitative questions, we used a Likert scale from 1 through 5 for the parent and student survey questions. The Likert scale is a well-established standard that enables simple quantitative analysis. In addition to the discrete-point questions on the Likert scale, we had some open-ended questions that allowed the respondents to express their thoughts freely. These open-ended responses added more meaning to the quantitative data and helped us discover issues that we had not considered earlier.

3.3.1 *Teacher Surveys*

The teacher questionnaire (Appendix C) was distributed to the two teachers whose classes we studied for this project. Both surveys were in English. Since the population size was only two, we decided to include primarily open-ended short-answer questions in the questionnaire. While discrete-point and scalar response questions help obtain specific rich and sensitive descriptions of events and perspectives, the data we obtained from the two teachers did not allow for any meaningful statistical analysis. Instead, the open-ended short-answer questions enable the teachers to describe the classroom environment

freely while still providing them some focus that enables them to answer the question succinctly. The teachers provided us with additional perspective on the students' language use and behavior, as well as their perceptions of the school's approach to educating bilingual students.

3.3.2 *Student Surveys*

We also distributed surveys to the students (Appendix B) in the two fifth-grade classes. The survey, a student assent form, and a parent consent form were distributed to all the students in both sections. Two of the students that participated in our study did not fill out a survey (but their parents filled out the parent survey). Working with a sample size of thirteen students, we felt that the best option to obtain clear information about specific factors and their effects on the students would be through the use of closed-ended questions. Multiple choice questions concisely allowed us to understand the variation in the factors such as amount and kind of exposure to English and Spanish, attitude towards English and Spanish, and language use in different kinds of interactions. In addition, having quantitative data for the internal and external factors enabled us to use statistical analysis to examine the relationship between the factors and English language skills of the students. The student survey was written in simple English and all students were sufficiently competent in English to complete the survey. The survey was piloted with an earlier fifth-grade class, which allowed us to see that students gave appropriate responses.

The survey was designed to take 20-30 minutes to complete. We distributed markers and candy to students who completed the surveys as an incentive for the completion. We primarily used the Likert scale from 1 through 5 for the quantitative survey questions. In order to analyze the data, we used the Statistical Package for Social

Sciences (SPSS) software. This software allowed us to obtain clear information about the correlation between particular factors and the English language proficiency of the students. In addition, it enabled us to examine the effect of the interaction between multiple factors on English language proficiency.

3.3.3 *Parent Surveys*

We gained a better understanding of the environment for the students at home through surveys completed by the students' parents (Appendix A). Surveys were distributed to the students in the class along with instructions for their completion. Students were asked to give the surveys to their parents and a deadline was set for the return of the completed questionnaires. Through our discussion with researchers who had conducted studies in the school before, we discovered that often the response rate on surveys for parents is low, especially in the elementary school in which we were conducting our study. The principal of the school informed us that the response rate is usually higher if the student receives an incentive for the completion of the survey by the parent. Hence, we offered candy and school supplies for students as incentives. For the parents, we offered a chance to win a gift card through a raffle. As expected, the initial response rate was fairly low and many students returned incomplete forms. In an effort to combat this, we gave students extra time to return the materials, and sent home the incomplete forms with tabs indicating the location for signatures and other missing information.

Another barrier we faced with parent surveys was the lack of education of the parents. The principal of the school informed us that most of the parents are not able to read or understand English, and some of them are not able to read Spanish either. In

order to combat this issue, we simplified the language in our surveys and had the surveys translated by a native Spanish speaker. We provided each student with two parent surveys, one in English and one in Spanish, and allowed the parents to respond in the language of their choice. Unfortunately, we were unable to account for any dialectal differences or illiteracy in both languages on the part of parents. This limitation may have caused us to receive a lower response rate from parents than otherwise possible. The combination of the simplification and translation served to make the surveys as accessible as possible.

Similar to the student surveys, the parent surveys primarily include closed-ended Likert scale questions. Adopting such an instrument enabled us to obtain the specific information we needed from the parents and also helped us analyze the data with statistical software. In addition to the closed-ended questions, we asked the parents some open-ended questions regarding the quality of education provided by the school. We felt that there might be specific aspects of the education that they liked or disliked. We wanted to learn more about these specific aspects and felt that it was best to allow the parents to answer the questions freely.

3.4 *Semi-Structured Interviews*

In addition to the surveys, we conducted interviews with the students. The surveys had provided us with basic insight about factors influencing the students, and interviews enabled us to explore the qualitative details that could not be conveyed due to the restrictions of the survey. While not as objective or clear as the quantitative data, these interviews provided interesting qualitative details and proved to be a critical factor in drawing our conclusions. The interview questions were prepared following a basic

analysis of the survey results and primarily included follow-up questions relating to the questions on the survey. They helped us further expand upon the quantitative analysis. Sample interview questions are included in Appendix D.

After the students had completed the surveys, we asked for volunteers from the classroom who were willing to help our study through participation in the survey. Two students volunteered for the interviews, and we conducted a 20-30 minute interview with each student in the guidance office of the school. The interviews were conducted between 8 and 9 a.m. Aside from the supervision of the guidance counselor, the guidance office was empty and the student was not distracted by any external influences.

We tried to create a very comfortable and conversational environment that allowed the students to speak freely. As a result, we used an informal, semi-structured interview format that includes a few questions as a guide but also allows us to follow meaningful tangents in certain situations. Interviews were conducted in English. Prior to the interview, we gave the students and their parents consent forms that explained the purpose of the interview and also asked for permission to tape record the interview. The tape recorder helped us record the responses from the students in a comprehensive manner while allowing us to focus on the interviewees during the interviews.

Our interviews with several students allowed us to gain a deeper, more thorough understanding of their English language skills, motivations for learning English, attitudes toward Spanish and English, as well as any other areas that needed clarification. Additionally we gained valuable insight into the interactions amongst the students, particularly regarding the languages used in various settings.

3.5 *English Proficiency Test*

We administered the English, fourth-to-fifth-grade version of the LAS Links K-12 Assessments (Appendix E) one month into the subjects' school year. The test helped us gauge the English proficiency of each student. Many schools, including our target elementary school, use this test, published by McGraw-Hill, to track students' yearly progress in English skills and determine when they are ready to exit English as a Second Language (ESL) programs. The participants, who are not in ESL programs, did not take this test before participating in our study. The test quantitatively measures students' skills in listening, reading, and writing, and provides a comprehension score based on the listening and reading performance. It rates the students at one of five levels: Beginning, Early Intermediate, Intermediate, Proficient, and Above Proficient. We used the quantitative scores we obtained from this test to find statistical correlations with quantitative survey results.

We proctored this test at the selected elementary school, under the supervision of the students' teachers. Having explained the instructions, we distributed the tests to the students and gave them forty-five minutes to an hour to complete the test; this is the usual timeframe provided to complete such a test when it is proctored by the schools. During the test, three members from our team observed the testing environment to identify any unusual factors that might have affected the students' performance on the test. This included factors such as a student being sick, not wearing corrective lenses, etc. These factors were carefully recorded to obtain a more detailed understanding of the factors affecting test performance. We maintained testing integrity by administering the test in a quiet, minimally distracting location at the same time for all students.

In addition, to minimize test anxiety and ensure the most accurate assessment of students' language skills, we conveyed that the results the students receive on the test would not be used by their teacher to determine their grade in class. Additionally, the results were not used to judge a student's intelligence, and were only used for the purposes of our research. All the results were kept confidential and private from everyone, including the teacher, outside the members of our team.

The examiner's guide of the LAS Links provided detailed "standard testing procedures" that we followed to the best of our ability. According to the guide, administering tests using these standard testing procedures would "ensure that test results are valid, reliable, and equitable," (McGraw-Hill, 2009). Each student who proctored the test read the instructions on administering the tests in detail and closely followed them on the test day.

3.6 *Confidentiality*

It is very important that our research team does not infringe on the privacy of the participants and maintain their confidentiality, as we are using the participants' personal information, such as nationality, as part of our research. In order to not to infringe on the privacy of an individual, we assigned each student a number. We used that number to identify that student in our research, and did not use his or her name in our thesis or research. This is known as a single-blind data collection. The consent form also contained that unique number for the individual. Once signed, the name was stored safely with the consent form, and that information was kept private.

Interview audio tapes and surveys were safely stored and only accessible to the research team. The data will be saved for two years following the study, and will then

be destroyed. In order to destroy the materials, all of the paper involved with the research will be shredded, the audio tapes will be discarded, and the electronic files will be deleted. In order to ensure the confidentiality of the data collected for the project and the safety of students, the project was closely reviewed by the Institutional Review Board. The Board approved all the instruments and the procedure, allowing us to move forward with our research based on the outlined methodology.

4. RESULTS

4.1 *Review of Hypotheses*

Adopting the research methodology described above, we looked into answering our major research question: How are language attitudes and identity, media exposure, and interaction related to the English language proficiency of heritage Spanish speaking elementary-school-aged students at our target Maryland public school?

In the process, we also wanted to address the following sub-questions:

- What is the relationship between students' attitudes toward English and their English skills?
- What is the relationship between the students' parents' attitudes toward English and the students' English skills?
- What is the relationship between the way students identify themselves linguistically and culturally and their English skills?
- What is the relationship between heritage Spanish-speaking students' exposure to different forms of English media and their English skills?
- What is the relationship between heritage Spanish-speaking students' productive and receptive interaction in English in various settings and their English skills? Some of the settings to consider include:
 - Parent or home
 - Teacher or school
 - Friends or community

Based on the findings of prior research, we had formulated a few hypotheses before the data collection. We expected that having positive attitudes toward English

would increase the students' desire to learn English, which would lead to superior English skills. Similarly, if the students' parents had a positive attitude toward English, the students would be encouraged to learn English and the result would also be superior English skills. Furthermore, if the students identified themselves to be from the United States or to be bilingual speakers rather than Spanish speakers, they would have a higher proficiency in English. In addition, we expected that greater English relative to Spanish media exposure would be related to better English skills. Finally, we expected that greater interaction in English in all settings would relate to superior English skills.

4.2 *Summary of Results*

4.2.1 Detailed descriptions and analyses of results acquired in various tests

After obtaining data from both the student and parent survey, SPSS was used to aggregate student and parent information. The first step was to create spreadsheets of the thirteen students and fourteen parents that participated in our study. Twelve complete sets of surveys were handed in containing one student survey with the corresponding parent survey. There were two additional parent surveys used for which completed student surveys were missing. These students did not complete surveys but took our test, thus allowing us to correlate parent survey responses with the appropriate student's test score. Similarly, there was also one additional student survey for which the corresponding parent survey was not completed. Responses from the multiple-choice questions were coded on a numeric scale from one to five, in which five represented an answer of "All English," one meant "No English," and all values in between represented corresponding levels of less English. Then, we created a score for each student and each independent variable by averaging the student's responses from all the questions relating

to that independent variable. Thus, we created the four main categories detailed in the methodology: interaction (receptive, one-way and productive, two-way), media exposure, internal valorization, and external valorization (parental versus community valorization). Please refer to Table 6 to see the complete breakdown of categories as well as descriptive statistics.

For each variable under consideration (independent variable), the team created a scatter plot of the variable against the score the student received on the LAS Links test (dependent variable). There were four scatter plots created per variable since each of the three individual sections of the LAS Links test (listening, reading and writing) was graphed against each variable, and a composite of all three sections was plotted against the variables as well. Each scatter plot was examined to identify outliers as well as erroneously entered data. Upon a complete review of the scatter plots, no outliers were found, and erroneously entered data was corrected. Additionally, the scatter plots served as a useful tool to identify patterns within the data visually. The assumption of our project is that linear models can explain the relationship that is observed. After checking our scatter plots for non-linear curve estimations, we found no compelling evidence to fit anything other than a linear model. These scatter plots are included in figures.

After scatter plots were created, bivariate correlations were run on each data set. The p-value is the probability of obtaining a test statistic at least as extreme as the one that was actually observed, assuming that the null hypothesis is true. In our case, the null hypotheses would suggest that the amount of English interaction, media exposure, and valorization would have no relationship at all with the student's English proficiency skills. The smaller the p-value, the more strongly the test rejects the null hypothesis. A

study will normally use a p-value of 0.05 to be the cut off for significance; however, since our study is exploratory in nature, we used a p-value of 0.15 to indicate a possible association. P-values were obtained by running a bivariate correlation function in SPSS using each variable and the appropriate LAS Links test component score. Separate models for students and parents were run.

Each table shows the correlations and p-values for one independent variable plotted against the LAS Links test scores – total score, listening section score, reading section score, and writing multiple choice score – as dependent variables. The following results pertain to data obtained from student surveys.

Independent variable: Receptive, one-way interaction scale – Student surveys

Dependent variables (LAS Links):	Total	Listening	Reading	Writing
<i>R</i>	-.200	-.412	.002	-.125
P-value	.512	.162	.996	.684

Independent variable: Productive, two-way interaction scale – Student surveys

Dependent variables (LAS Links):	Total	Listening	Reading	Writing
<i>R</i>	-.413	-.115	-.251	-.562
P-value	.161	.709	.409	.046*

Independent variable: Media exposure scale – Student surveys

Dependent variables (LAS Links):	Total	Listening	Reading	Writing
<i>R</i>	-.200	-.329	-.170	.064
P-value	.513	.272	.578	.835

Independent variable: Internal valorization scale – Student surveys

Dependent variables (LAS Links):	Total	Listening	Reading	Writing
<i>R</i>	-.318	-.134	-.221	-.341
P-value	.289	.662	.468	.254

Independent variable: External valorization scale – Student surveys

Dependent variables (LAS Links):	Total	Listening	Reading	Writing
<i>R</i>	-.370	-.439	-.189	-.249
P-value	.213	.134	.536	.413

As measured by the student surveys, at a significance level of $p = 0.15$, productive interaction and writing scores were negatively correlated, and external valorization and listening scores were negatively correlated. The other correlations were not statistically significant. There is a fifteen percent chance that anything found to be significant may actually be a false positive since we used a p-value of 0.15 as our level of significance (Type I error).

The following results pertain to data that was obtained from parent surveys.

Independent variable: Receptive, one-way interaction scale – Parent surveys

Dependent variables (LAS Links):	Total	Listening	Reading	Writing
<i>R</i>	-.539	-.447	-.449	-.406
P-value	.047*	.109*	.107*	.150*

Independent variable: Productive, two-way interaction scale – Parent surveys

Dependent variables (LAS Links):	Total	Listening	Reading	Writing
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<i>R</i>	-.194	-.273	-.052	-.226
P-value	.506	.346	.860	.437

Independent variable: Media exposure scale – Parent surveys

Dependent variables (LAS Links):	Total	Listening	Reading	Writing
<i>R</i>	-.375	-.222	-.471	-.120
P-value	.207	.467	.104*	.697

Independent variable: External valorization scale (parental) – Parent surveys

Dependent variables (LAS Links):	Total	Listening	Reading	Writing
<i>R</i>	-.415	.053	-.392	-.563
P-value	.140*	.856	.166	.036*

Independent variable: External valorization scale (community) – Parent surveys

Dependent variables (LAS Links):	Total	Listening	Reading	Writing
<i>R</i>	.153	.061	.057	.285
P-value	.619	.844	.853	.346

As measured by the parent surveys, at a significance level of $p = 0.15$, receptive interaction and test scores, including totals and all subscores, were negatively correlated; media exposure and reading scores were negatively correlated; and parental external valorization and total and writing test scores were negatively correlated. The other correlations were not statistically significant.

The results of the LAS Links language assessment can be found in Appendix G.

Additionally, qualitative data was obtained from several sources, including the open-ended questions on the surveys to the students, parents, and teachers, and from student interviews.

There were twelve questions at the end of the student survey that allowed for open-ended responses. The first eight questions from Section A asked about the language-learning environment in the classroom and the last four questions in Section B asked about the school's efforts to promote multiculturalism, particularly Hispanic cultures. The questions asked for a yes or no response and further explanation. Unfortunately, most students simply answered yes or no and repeated the question. Thus, we did not receive many detailed responses.

However, four questions in particular generated responses that created interesting trends. The first question in Section A asked, "Do some students in your class have trouble speaking English?" All three students who answered "no" scored below the mean of 76 on the LAS Links test, while only two of the nine students who said "yes" scored below the mean. The second question asked whether students who had trouble speaking English slowed down the class or made learning difficult. All three students who answered no scored above the mean. Question seven asked, "Do kids make fun of you because the way you speak? If so, why?" and all respondents said no. Finally, the last question in section A asked if the student takes or has ever taken ESOL classes. Five of the six non-ESOL students scored above the mean but three out of the seven ESOL students also scored above the mean.

The parent survey included five open-ended questions asking the parents to evaluate their child's education and to identify themselves culturally. All of the parents

responded highly favorably and generally approved of the quality of education that their child was receiving. Also, none of the parents considered themselves to be American or from the United States, with the possible exception of one parent, who wrote, “American/But I come from a country in Central America.” All but two of the parents filled out a Spanish version of the survey.

The teacher surveys, completed by the two fifth-grade teachers at the school, contained three sections of open-ended questions. The three sections asked about both the classroom and school environment, the teachers’ opinions on testing and language education, and a few background questions about the teachers themselves. These questions allowed us to gain insight on the teacher’s perspective of the classroom environment that may explain some of the students’ test results. The two teachers are different in terms of their background – one has been teaching considerably longer and has a more extensive knowledge of Spanish – but they both provided similar responses in some instances.

Both teachers attributed students’ performance in the classroom and on tests to parental involvement and the environment at home. One teacher said “a lot has to do with parental support and the motivation children receive at home.” In another question about the often cited below average reading performance of Hispanic students, the other teacher believed that a cause was the “lack of reinforcement at home.” He acknowledged that “many of our parents are illiterate in both English and their own language.” In our study, we did find the home environment to be related to English proficiency score, in the case of receptive interaction and parental valorization, although these had a negative effect. One difference was that one teacher put a strong emphasis

on the need for more ESOL teachers and more books in addition to mentioning parental involvement (the other teacher only emphasized parental involvement). Otherwise, the other questions about classroom environment, structured reading time, and information about the library, yield similar responses.

Finally, the last source of our supplementary qualitative data came from student interviews. We originally conducted seven student interviews based on randomly selecting volunteers from the fifth-grade students. However, due to having incomplete surveys, lack of consent, or not being a heritage Spanish speaker, most volunteers we interviewed were ineligible for the study, leaving us with only one valid interview. The interviewee, “Juanita,” was able to answer for us several questions about bilingualism, Spanish, and Latino culture. Incidentally, she was also the highest scoring individual on our LAS Links tests. Her responses revealed to us a story and background that is very similar to many other heritage language learners. For example, she was born in the United States but her parents were not; her parents still speak Spanish, which is a language she speaks at home as well. Juanita says that she is mostly around Spanish speakers at home, which includes family friends, such as her dad’s soccer buddies. She also told us that her community was mostly Spanish as well, with the majority of the spoken and written language in her neighborhood being in Spanish, too.

However, Juanita and her peers, both heritage and non-heritage Spanish speakers, all speak English at school. Thus, we can see the influence of the two languages being split into major, different domains: her Spanish-language input mostly comes from home and her parents, while she is exposed to English at school from her peers and teachers. At school, Juanita still sometimes speaks Spanish, during recess and

sometimes during unstructured classroom time, she says. While she has friends that are both Hispanic and non-Hispanic, she likes to sit with friends at a “Spanish table,” where only “like four” people are not Hispanic. Furthermore, she indicated a preference for being around other bilinguals so that she can speak to them in either of her languages, if she pleases. Juanita also identifies herself as “Hispanic” rather than American or Hispanic-American.

We also asked Juanita about her media exposure, which resulted in some interesting responses. For example, Juanita says that she mostly reads books in English (“but I got just like two Spanish books,” she told us) and also watches TV in that language. Her reason for doing so, however, was not out of convenience or a preference for English per se, but because she admitted to not knowing how to read or write in Spanish. Based on previous research, most heritage language learners are in a similar situation, in which they have not had formal instruction in their mother language and can only speak it colloquially. Thus, like Juanita, they have to learn about a second language while never having fully developed their primary language.

Finally, we asked Juanita about Latino cultures, and her responses revealed an acute awareness of her Hispanic culture. She tells about learning about her heritage from both her parents and from her school and from previous visits to her home country. Juanita maintains contact with her relatives in El Salvador and Honduras and celebrates cultural holidays. She says she likes both the United States and her home country equally. Overall, Juanita provided detailed and insightful responses to our interview questions about her different home and school environments, media exposure, and her Hispanic culture.

4.2.2 Immediate implications of results as they relate to respective hypotheses

The results from our data analysis were surprising because we found some very unexpected correlations between our independent factors and our dependent variable, the students' test scores. As mentioned, the individual factors we surveyed fell into either one of three categories: media exposure, valorization (internal and external), and interaction (productive and receptive). Our hypothesis was that higher levels of media exposure to, valorization of, and interaction in English would correspond to higher test scores. However, the factors we measured either had no statistically significant correlation with the test scores or actually had a negative correlation. For example, the level of media exposure in English did not seem to make a difference to the test scores, while valorization of English, particularly parental valorization, had a negative correlation with the test scores. Additionally, the effect that English interaction had on test scores varied depending on the type of interaction. However, these relationships must be interpreted with caution considering the limitations of the study.

Media Exposure

Media exposure measures the amount of media sources in the student's lives that are in English. We examine the media in both the student's home and the larger community, considering sources such as books, newspaper, magazines, television, radio, etc. However, our results showed that the amount of media exposure in English did not have a statistically significant correlation with the students' test score. When media exposure was measured based on responses from the student surveys, it had a negative correlation with the test scores, but this correlation was weak ($r = -0.200$) and insignificant ($p = 0.513$). When it was measured from the parent survey responses, this

correlation was also found to be weak ($r = -0.375$) and insignificant ($p = .207$).

However, there was a significant correlation between media exposure and the scores from the writing section alone ($p = 0.107$), but this correlation was weak ($r = -0.12$).

Thus, in our data, we did not find a strong or significant correlation between amount of media exposure that a student has in English and his English language proficiency.

Valorization

Valorization, or the internalization of sociocultural values toward English, including its status, was measured both internally and externally. Internal valorization, which stems from the student's perspective, includes not only the student's attitudes toward the English language but also his identification as a bilingual or monolingual. External valorization, coming from outside of the student, was separated into the parents' and the overall community's attitudes.

Internal valorization, as measured by the student survey, had a slightly negative correlation with the test scores ($r = -0.318$) but this was not found to be statistically significant ($p = 0.289$). Neither was the student's identification as an "American," which also had an insignificant, weak, and negative correlation with the test scores. Thus, our survey found no meaningful relationship between the student's attitudes toward English and how well he performed on the LAS Links test.

At first glance, external valorization also does not seem to have a significant correlation with the LAS Links test results. The p-value for external valorization based on student survey responses is 0.213 and 0.382 for parent survey responses. However, in the student survey, there was a significant correlation between external valorization and the listening section scores ($p = 0.134$). This relationship was a moderately strong

negative relationship ($r = -0.439$). In the parent survey, when external valorization was further separated into two domains (parental versus community valorization), it was shown that parental valorization was mostly responsible for explaining the correlation with the test results. The p-value for parental valorization was 0.140 while the p-value for community valorization was 0.619. Thus, we can say that when a parent has a more positive attitude toward English, feels more confident about using it herself, and encourages her child to learn it, it is correlated in our data with the student having a lower English proficiency score. This seemingly paradoxical statement will be explained in greater detail in our discussion section.

Interaction

Our interaction factor measured both productive and receptive communication, so not only were the student's own interactions included, but the language of communication surrounding the student was included, too. In both the parent and student surveys, we found that productive interaction had an insignificant and slightly negative correlation with the test scores ($p = 0.161$ in the student survey $p = 0.506$ in the parent survey). However, there was a significant correlation found between productive interaction and writing scores in the student survey ($p = 0.046$). This negative relationship was moderately strong, with an r-value of -0.419. Thus, more productive interaction in English was corresponded with slightly lower test scores, particularly the scores in the writing section.

Receptive interaction, on the other hand, had a moderately strong relationship with the student's test score. When measured from the results of the parent survey, the two variables were shown to have a correlation coefficient of -0.539 and a linear

regression analysis between the two yielded a p-value of 0.047. When using student survey responses to measure receptive interaction, the correlation with test scores was not as significant, with a p-value of 0.512. The discrepancy between the two surveys will be discussed in our next chapter. However, based on the parent survey alone, receptive interaction and the test scores produce a negative correlation that is moderately strong and significant. We can conclude that when more of the communication around the students occurs in English, in our sample, it corresponds with a lower performance on the LAS Links. Since the students live in a predominantly Spanish-speaking community, perhaps the quality of English spoken around the student is not so good, and thus contributes to lower test scores. This relationship should be further explored in the future studies for a better understanding.

Conclusion

In conclusion, we were surprised about many of the results we obtained from the data analysis. Based on our hypotheses, we were expecting to find strong, positive correlations between our independent factors and the test scores. Instead, we found that with some factors no significant correlations existed, and with other factors that a negative correlation actually existed. For example, media exposure had no significant relationship with the test scores; internal valorization and productive interaction had weak, negative relationships on test scores but these were not found to be significant. Only receptive interaction and external valorization, specifically parental valorization, had a significant relationship with the test scores. These were negative correlations, contrary to our hypotheses. However, since we are using a liberal .15 cutoff, we have a greater risk of obtaining false significance, and since we are reporting quite a few tests,

one or two false positives are to be expected. These results and their implications will be explained in further detail in our discussion section.

5. DISCUSSION

5.1 *Conclusions from results and analysis*

Interaction

We hypothesized that more productive interaction in English would be positively correlated with better English skills. We also hypothesized that more receptive interaction in English would be positively correlated with better English skills. Our data did not support either of these hypotheses. There was no significant correlation between productive interaction and English skills. It is possible, however, that a correlation does exist between productive interaction and English skills but was unable to be measured due to our small sample size.

Despite the lack of correlation between productive interaction and English skills, there was a significant correlation between receptive interaction and English skills. This correlation was negative, which is the opposite of what our hypothesis predicted. This means that students with high levels of receptive interaction in English generally performed worse on an English skills test than students with less receptive interaction in English. This may seem to be counterintuitive, but this effect may be able to be explained in this population. It is possible that the students in our sample are exposed to degraded English because the community in which they live is predominantly filled with adults who are learning English as a second language or who primarily speak Spanish. Like Juanita mentioned in her interview, the surrounding community is mostly Spanish, including stores and signs, and thus the written or spoken English in the area may not be standard academic English.

Media Exposure

We originally hypothesized that more exposure to media in English would be related to better English skills. Our data did not support this hypothesis. There was no significant correlation between the language of media exposure and English skills. This may have been due to the way in which our instrument tested for exposure to media. Instead of focusing on the amount of exposure to media in a given language, we assumed that the students were exposed to media. We asked questions on whether and to what extent the exposure to media was in English or Spanish. A correlation may have appeared if the instrument asked about the amount of exposure to media, as well as the language of exposure. We had hoped to remedy this problem through interviews (for example, Juanita told us she had four books in Spanish but couldn't read the language) but due to the lack of consent, we could not interview the entire sample size. Finally, it is also possible that a correlation would be evident with a larger sample.

Internal Valorization

Internal valorization captures how important a student thinks it is to learn a language and how connected the student feels to that language. We predicted that a positive attitude toward English would be positively correlated with better English skills. We also predicted that students who identify themselves as being from the United States would have better English skills than those students who identified themselves as being from another country. These hypotheses were not supported by the data. Instead, we found that there was no correlation between internal valorization and English skills. Furthermore, in our one interview of the highest scoring student on the English proficiency test, it was revealed that one student actually thought of herself as Hispanic.

It could be true that there is no correlation between these two components; however, it is also possible that a correlation may be evident with a larger sample size. Further it is possible that our instrument was not effective in measuring the students' internal valorization of English. Another possibility is that the fifth-grade students are not able to identify and express their feelings toward a language.

External Valorization

Our next hypothesis predicted that positive attitudes and encouragement from the parents and community surrounding the students would be positively correlated with better English skills. However, there was a significant negative correlation between parental external valorization and English skills. This result did not support our original hypothesis, but if future studies replicate this finding, it could have interesting implications. If parents do not encourage a student to use English, then it is plausible that they are encouraging the students to use Spanish. When Spanish is highly valued in the home, it is likely that the student will develop good Spanish skills. If the student receives input and positive encouragement for English in school, and both languages are sufficiently valued, additive bilingualism may occur, and the child's overall language ability may benefit (Hamers & Blanc, 2004).

It is possible that the child's well-developed Spanish language skills could transfer to their English skills, as in Schoonbaert, Hartsuiker, and Pickering (2007). We did not expect this finding because Schoonbaert, et al., (2007) tested late sequential bilinguals, who likely had greater metalinguistic awareness than the elementary-school student participants in our study (Schoonbaert, et al., 2007).

It is also possible that a medium score (close to three on the Likert scale) on

parental external valorization, indicating nearly equal valorization of English and Spanish, would optimize student English scores, with lower English scores corresponding to more extreme parental external valorization scores. This pattern would be consistent with literature that emphasizes the importance of L1 valorization, where L1 is a minority language, such as De Houwer (2007), as well as literature on additive bilingualism and transference of language skills (De Houwer, 2007; Hamers & Blanc, 2004; Schoonbaert, et al., 2007). In our sample, most of the parental external valorization scores were near or above three, so a larger, more diverse sample would be needed to investigate this possibility. Preliminarily, however, we tested this possibility by transforming the parental external valorization score, which ranged from all Spanish (one) to all English (five), to a new score called parental external valorization balance, representing the parental external valorization score's closeness to three and ranging from all one language (one) to both languages equally (five). Compared to the parental external valorization scores, the parental external valorization balance scores are more strongly correlated with total test scores ($R = .554$), and with a lower p-value (.040). The correlation is strongest with writing subscores, which yield $R = .618$ and $p = .019$. Thus, the suggested pattern appears to be consistent with our data.

Another possible explanation is that some parents value English less when they see that their child has good English skills but poor Spanish skills. In this case, they may encourage their English-speaking child to speak Spanish instead. For example, in our interview of the student with the highest English score, the student told us that her parents only spoke Spanish to her and taught her about Hispanic culture. Thus, it may be the best speakers of English to have parents who value English the least while the

parents of students who struggle with English may want their child to focus more on English in order to be more successful in American society.

5.2 *Comparison of own results with those of similar studies*

Receptive Interaction

Similar to the Gutierrez-Clellen and Kreiter (2003) study, we did not obtain a correlation between exposure to receptive interaction in English, as reported by the students, and English language skills (Gutierrez-Clellen & Kreiter, 2003). Unlike Gutierrez-Clellen and Kreiter, we did not restrict our student sample according to any measure of degree of bilingualism; the student subjects in our study had been exposed to English for at least three years, so we may have encountered the same difficulties in finding a correlation as in this previous study.

However, the parents reported different results for student English exposure. As measured by the parent surveys, the students' exposure to receptive interaction in English was statistically significant and negatively correlated with English skills as a whole, specifically in the listening and reading tests. This difference in reported English exposure in student versus parent surveys suggests that one or both of the survey set results may not be valid. Possible reasons for this discrepancy include bias, different perspectives or interpretations of the survey questions, or a lack of knowledge or awareness by either students or parents of actual English exposure.

If receptive interaction in English and English language skills are in fact negatively correlated for these heritage Spanish speaking bilingual students, a number of other factors may be at work. It is possible that students who are exposed to more Spanish (having a lower English exposure score) are those who have more total language

exposure and that the students are able to transfer their language skills from Spanish to English. It is interesting to note that only the two receptive language skills, listening and reading, were found to be correlated with receptive interaction.

External Valorization

Parental valorization of English was statistically significant and negatively correlated with student English skills in reading and writing. We expected to find a positive correlation based on our review of previous studies, such as that by Sostre Rodriguez (Sostre Rodríguez, 2005). However, low parental valorization of English may correlate positively with high parental valorization of Spanish. Parental valorization of L1 contributes positively to children's language development, and children who have more fully developed their L1 skills before beginning to learn L2 may be more able to transfer linguistic skills across languages (Conboy & Thal, 2006; Schoonbaert, et al., 2007). Similarly, the parents who value English most may dissuade their children from retaining their Spanish and thus contribute to subtractive bilingualism.

Other Factors

We did not find a statistically significant correlation between English language skills and media exposure, internal valorization, productive interaction, or the student's report on receptive interaction. These non-findings could be explained by many reasons. Our sample size was very small, and true trends may be difficult to produce with such a population. Similar studies had larger sample sizes, which may explain why those researchers were able to find significant correlations. Also, it may be possible that the questions on the survey that were used to gauge media exposure, internal valorization,

productive interaction, or the student's report on receptive interaction did not correctly assess the students. We used a different tool than other researchers to determine these factors, which could be a reason for the lack of correlations.

Theories and Principles

The few statistically significant correlations we found were the opposites of our hypotheses, so our study does not provide support for the theories and principles that guided our study and methodology. Having results that conflict with the literature that we studied is intriguing. Although the statistically significant correlations did not support our hypotheses, the non-findings did not disprove our hypotheses. It is necessary to examine this field of study further, modifying our instrument and population, in order to determine a significant correlation between English skills and the factors we studied. It is possible that our results were opposite to our hypotheses due to irregularities in our tool and population. Further analysis with a more accurate tool and larger population could replicate our findings or even prove our hypotheses.

5.3 *Assessment of successes and failures of methodology, instruments, etc. with respect to individual hypotheses*

In assessing the relative successes and failures of the methodology and instruments employed in our study, it is first important to reexamine our hypotheses. We expected to discover that positive attitudes toward English will increase the students desire to learn English which will lead to superior English skills. Similarly, if the students' parents have a positive attitude toward English, the student will be encouraged to learn English and the result will be superior English skills. Furthermore, if the students identify themselves to be from the United States or to be bilingual speakers

rather than Spanish speaker, they will have a higher proficiency in English. In addition, we expect that greater English relative to Spanish media exposure will be related to better English skills. Finally, we expected that greater interaction in English in all settings would relate to superior English skills.

Reviewing our methodology within the context of these hypotheses shows some limitations on the overall effectiveness of our methodology, instruments, and measures. Nearly every relationship we tested for and analyzed turned out to be negative, which was the opposite of what we had predicted through our hypotheses and from our review of pertinent literature. Of those relationships between test results and other variables that were not negative, these were non-findings. For example, valorization was negatively correlated with students' performance on the test, and levels of media exposure had no real impact on test scores. However, we cannot yet be certain that there even exists a difference between our findings of negative correlations and no correlations because of our small sample size. This factor limits our ability to draw any significant conclusions regarding our data because when considered statistically, there is essentially no difference between the negative relationships and non-findings.

Examining these non-findings in our data is made more difficult due to our small sample size. The fact that we have non-findings and statistically irrelevant correlations could very well mean that in fact no relationships exist. Our ability to detect any true relationships amongst the data, positive or negative, is drastically diminished by our small sample size and subsequent low statistical power. Knowing this, it is difficult to assess the true performance of our methodology and instruments because the results of our study may not accurately reflect the actual effectiveness of our methods and

measures.

One conclusion that could be drawn from the resulting data refers to our numerical coding scales for multiple-choice survey responses that were created to measure variables such as valorization and media exposure. It is possible that our scales were perhaps not the best measures of these variables, yielding statistically irrelevant correlations, yet this conclusion cannot be made with complete certainty without first testing our scales on a broader, more comprehensive population in order to assess a more accurate portrayal of their effects.

Also, the surveys we designed as part of our instruments may have failed to explain our hypotheses. It became clear once we started reviewing the returned surveys that some students misinterpreted or misunderstood a number of survey questions. For example, we asked several questions about relative English and Spanish usage, but these questions would result in contradictory responses (ex. some respondents would answer that all their books are in English and for the next question answer that also all their books are in Spanish, when they might have meant that some of their books are in English and some of their books are also in Spanish). The data yielded from these questions is not necessarily representative of the reality of conditions we sought to assess. This is a failing on our part as we could have been more thorough in our explanations of certain questions on the survey.

Another obstacle we encountered when reviewing survey data was accounting for blank responses. While calculating the composite score for each variable, we elected to ignore the blank responses. Thus the value of the variable may not completely reflect the students' true score for a given variable. Furthermore, we chose to report the

students' scores from the LAS Links test in terms of percentages instead of raw scores. One relative success we encountered came in analyzing the correlation between receptive interaction and test scores. These two variables produced a statistically significant (relative to our sample size) negative relationship, implying that higher levels of exposure to English or a greater degree of communication in English occurring in a student's immediate environment resulted in lower scores on the test. While this is opposite of what we had predicted in our hypothesis, it could very well demonstrate through statistical significance that we did in fact produce an accurate measure of receptive interaction through our pertinent survey questions.

Overall, understanding that all but one relationship predicted by our hypotheses turned out to be a non-finding with statistical insignificance prevents us from drawing any real conclusions about the effectiveness of our methodology and instruments that yielded these results. We can say with relative certainty that given a larger sample size, much more about the data and our methods would become clear, and we would be able to perform a more thorough assessment of their effectiveness in answering our research questions and in confirming or disconfirming our hypotheses.

5.4 *Areas possibly overlooked, circumstances to possibly account for any discrepancies that might have developed*

While conducting the data collection phase of our study, circumstances arose that may explain some discrepancies in our data. First of all, on the day of testing, our team did encounter some difficulties. The school provided us with two different testing rooms to administer the test. We divided the team into two groups of three, sending each group to a testing room. Time management problems and technical difficulties did

occur in both rooms. In one of the testing rooms, the students were given ample time on some of the sections and were rushed to complete others. In the other room, the CD that was used to play the listening section of the test did not work correctly at first, and the listening section was administered at the end of the test, rather than at the begin where it was scripted. As the test was being administered, members of the research team walked around the classroom to make sure the students were on task. Some students seemed bored with the test, and it is possible that some of these students did not take it very seriously. This could have affected their final score. Since the students were not all together in one testing room, it may be possible that the two groups' experience with the test was slightly different. This could lead to discrepancies in the results of the examination.

The population that we tested was comprised of two classes of fifth grade students in the school. They each had a different teacher. These two teachers had very different personalities and teaching methods. It is possible that the curriculum of the two classrooms is different and that the teachers may stress different components of their subject matter. One of the teachers might find "subject A" important, while the other simply glazes over the topic. This was something that was entirely out of our control. Similar to the testing situation, the two groups have unique experiences with their education, which could account for discrepancies in the total scores of the examination.

The final group of subjects who had completed and received consent on both surveys turned out to be very small. It is very difficult to assess a population when very little is known about the group. We are unable to determine if the results of the LAS Links test reflected the normal marks that these students receive on English

examinations. The final test scores of our subjects ranged from the low 60s to the high 80s. We took every student and their test score into account in order to analyze our results. It is possible that the students who received very low scores were anomalies amongst their peers, and these aberrations in resulting data could have hindered the possible conclusions and definitive correlations of our research.

Furthermore, some of the returned surveys we received had sections that were incomplete. In order to assess the survey results in comparison to test scores, we ignored blank answers in the calculation of the composite variables. Clearly we have no way of determining how the participant would have answered these particular questions. This practice could have given us untrue answers for our results in this small population.

We also encountered some more difficulties while performing our data analysis. While entering our data into SPSS, it seemed that some of the participants of our study did not fully understand the meaning of the questions on the survey. For example, we asked each student to report his or her age and how many years he or she had been going to school in the United States of America. One student responded that he was ten years old and has been going to school in the United States for ten years. This response does not make any sense since most students begin attending school at age five. This misunderstanding could have occurred on other, more important questions. Such occurrences were overlooked in the methodology of our study. This could have very well led to discrepancies in our results as well as irregularities or false responses.

After reviewing our results, it seemed that media accessibility had very little correlation with the overall test scores. Since this is an exploratory study, this result is still very useful to the research. It may also be a possibility, however, that the survey

questions about media accessibility did not accurately assess what was intended for the solution. For example, we asked about the amount of English media sources relative to the amount in Spanish (i.e. “My books are mostly English” vs. “My books are mostly Spanish”). Results may have differed if we asked about absolute amounts instead of relative amounts (ex. “My child reads approximately five books in English a week and one book in Spanish”). Thus, it is difficult to say whether any particular result is valid or a discrepancy in reality due to the design of questions and their potential inability to account for what the team intended. This was an area that was overlooked by the research team at the time of creating the testing material and methodology of the study.

Additionally, more usable information could have been garnered from the interviews that we conducted. One potential change that could be made is administering the interviews in Spanish, or at least providing students the option to conduct their interview in a language other than English. As we found throughout our review of the existing literature, language learners often identify themselves with a particular culture or ethnic group as well as an associated language (Gatbonton, et al., 2005). Throughout this study, we have attempted to make students feel as comfortable as possible. Heritage Spanish speakers may have been more comfortable expressing their feelings and attitudes to another Spanish speaker. By providing students with the opportunity to conduct their interviews in Spanish we may have gathered more revealing data about the language learning process in this particular environment.

5.5 *Broader implications and future research*

Although we were able to find several correlations linking the factors we analyzed to English language performance, our population was somewhat limited. As a

result, the conclusions we drew cannot be considered statistically reliable. Fortunately, our research does not stand alone. Our findings can be utilized by future language researchers as the basis for their exploration, much like the findings we were able to build on in our literature review.

One future direction that our research could take would be a simple expansion of the framework that we have already employed. The logistical aspect of dealing with a school as undergraduate students proved quite difficult. An organization with more resources and more influence might be able to coordinate a study spanning multiple schools while maintaining a consistent testing environment, yielding statistically significant results.

Another possible direction that future studies could take is a more thorough analysis of the individual factors, both internal and external, that we explored. We took a very broad approach in examining the factors. Future research could study one of the factors for which we found a correlation with language performance across a larger population. Researchers could then make a more substantial determination regarding that factor's influence on language acquisition. Under our current format, the possibility of false-positive correlations exists. Hopefully, a more specific study with a larger population would address this concern. A different spin to explore particular factors might include testing a large, heterogeneous population of monolinguals, bilinguals, trilinguals, etc. for the influence of a number of factors. Then if any particular factor seems to stand out among all students versus only bilinguals (as done in our study), then that factor can be focused on and tested on a specific sub-population.

A different approach to the factors may also include asking questions about the

heritage language. Our students were all heritage Spanish speakers, but were asked questions mostly concerning their English usage. The implementation of Spanish usage questions may elicit more detail about aspects of language usage that may not occur in English, but that do occur in Spanish. Furthermore, the use of Spanish usage questions could serve as a cross reference for Spanish usage versus English usage if the same question asks about both languages.

Yet another direction this study could take would be the addition of a larger teacher component. Under our current framework, the teacher survey took on a very anecdotal, supplementary role. A future study, spanning multiple schools, could determine a way to insert a quantitative aspect to a teacher survey/questionnaire. This would provide a new perspective and allow for questions not included under our student and parent-focused framework. Furthermore, the input of teachers may be extremely valuable because it provides the expertise of an individual who has been working with the students over an extended period of time. This relationship with students may elicit information that young students may not be able to perceive. Thus, having a teacher survey that is thorough and contains quantitative data may prove to be a valuable asset.

We were able to answer several questions about language acquisition through our research. Unfortunately, due to our limited sample size, we cannot assert that our conclusions are statistically significant; however, we believe that our research can serve as a starting point for future language studies.

References

- Bacherman, D. M. (2007). *The use of students' first language in second-language learning in a computer-based environment*. 67 Dissertation/Thesis, Walden University.
- Bae, J. (2007). Development of English Skills Need Not Suffer as a Result of Immersion: Grades 1 and 2 Writing Assessment in a Korean/English Two-Way Immersion Program. *Language Learning*, 57(2), 299-332.
- Bialystok, E., Luk, G., & Kwan, E. (2005). Bilingualism, biliteracy, and learning to read: interactions among languages and writing systems. *Scientific Studies of Reading*, 9 (1), 43-61.
- Blom, J.-P., & Gumperz, J. J. (2000). Social meaning in linguistic structure: code-switching in Norway. In W. Li, *The Bilingualism Reader* (pp. 111-136). New York: Routledge.
- Brenneman, M. H., Morris, R. D., & Israelian, M. (2007). Language preference and its relationship with reading skills in English and Spanish. *Psychology in the Schools*, 171-181.
- Brown, H. D. (2000). *Principles of language learning and teaching* (4th ed. Vol. xii). White Plains, NY: Longman.
- Chand, V. (2006). Influences on target language proficiencies. *Current Anthropology*, 47(5), 706.
- Cobo-Lewis, A. B., Eilers, R. E., Pearson, B. Z., & Umbel, V. C. (2002). Interdependence of Spanish and English knowledge in language and literacy among bilingual children. In D. K. Oller & R. E. Eilers (Eds.), *Language and literacy in bilingual children* (pp. 118-134). Clevedon: Multilingual Matters.
- Cobo-Lewis, A., Oller, D. K., & Pearson, B. (2007). Profile effects in early bilingual language and literacy acquisition. *Applied Psycholinguistics*, 28, 198-229.
- Conboy, B. T., & Thal, D. J. (2006). Ties Between the Lexicon and Grammar: Cross-Sectional and Longitudinal Studies of Bilingual Toddlers. *Child development*, 77(3), 712-735.
- Dabene, L. (2002). From Applied Linguistics to Sociolinguistics: A Research Itinerary. *International Journal of the Sociology of Language*, 105-121.
- De Houwer, A. (2007). Parental language input patterns and children's bilingual use. *Applied Psycholinguistics*, 28(3), 411-424.

- Figueroa, J. R. (1993). Can Parental Involvement and Bilingual Education Save Our Language Minority Children from Becoming Disempowered and Disenfranchised? *Illinois Schools Journal*, 72(2), 40-49.
- Fuller, J. M. (2007). Language Choice as a Means of Shaping Identity. *Journal of Linguistic Anthropology*, 17(1), 14.
- Gardner, R. C., Lalonde, R. M., & Moorcroft, R. (1985). The roles of attitudes and motivation in second language learning: Correlation and experimental consideration. *Language Learning*, 35(2), 207-227.
- Gardner, R.C. (1985). *Social psychology and second language learning: The role of attitudes and motivation*. London: Edward Arnold.
- Gardner, R.C., & Lambert, W. E. (1959). Motivational variables in second language acquisition. *Canadian Journal of Psychology*, 13, 266-272.
- Gardner, R. C., & Lambert, W. E. (1972). *Attitudes and Motivation in Second-Language Learning*. Rowley: Newbury House Publishers, Inc.
- Gass, S. M. (1997). *Input, interaction and the second language learner*. Mahwah, NJ: Lawrence Erlbaum.
- Gatbonton, E, Trofimovich, P, & Magid, M. (2005) Learners' ethnic group affiliation and L2 pronunciation accuracy: A sociolinguistic investigation. In Levis, J. (Ed.). *Reconceptualizing L2 Pronunciation*. *TESOL Quarterly*, 39 (3) 489-511.
- Giles, H., & Johnson, P. (1981). *The role of language in ethnic group relations*. Chicago: University of Chicago Press.
- Goldstein, B. (2004). *Bilingual language development and disorders in Spanish-English speakers*. Baltimore, Md.: P.H. Brookes Pub.
- Guilloteaux, M. J., & Dornyei, Z. (2008). Motivating Language Learners: A Classroom-Oriented Investigation of the Effects of Motivational Strategies on Student Motivation. *TESOL Quarterly*, 42(1), 22.
- Guimond, S., & Palmer, D. L. (1993). Developmental changes in ingroup favouritism among bilingual and unilingual Francophone and Anglophone students. *Journal of Language and Social Psychology*, 12, 318-351.
- Gutierrez-Clellen, V. F., & Kreiter, J. (2003). Understanding child bilingual acquisition using parent and teacher reports. *Applied Psycholinguistics*, 24(2), 267.
- Hamers, J. F., & Blanc, M. H. A. (2004). *Bilinguality and Bilingualism*. New York: Cambridge University Press.

- Hammer, C. S., Miccio, A. W., & Rodriguez, B. L. (2004). Bilingual language acquisition and the child socialization process. In B. Goldstein (Ed.), *Bilingual language development and disorders in Spanish-English speakers* (pp. 21-50). Baltimore: Brookes.
- Hansen, J. G., & Liu, J. (1997). Social identity and language: Theoretical and methodical issues. *TESOL Quarterly*, 39(3), 489-511.
- Hatch, E. (1978). Acquisition of syntax in a second language. In J. Richards (Ed.), *Understanding second and foreign language learning* (pp. 34-70). Rowley, MA: Newbury House.
- Hoff, E. (2006). How social contexts support and shape language development. *Developmental Review*, 26(1), 55-88.
- Lambert, W. E., Just, M. A., & Segalowitz, N. (1970). *Some cognitive consequences of following the curricula of the early grades in a foreign language*.
- Lambert, W. E., & Taylor, D. M. (1996). Language in the Lives of Ethnic Minorities: Cuban American Families in Miami. *Applied Linguistics*, 17(4), 24.
- Langley Park/McCormick Elementary School. (2008). *Special Education*. Retrieved April 10, 2009, from Prince George's County Public Schools: <http://www1.pgcps.org/langleyparkmccormick/index.aspx?id=25206>
- Le Page, R. B. (1968) Problems of decription in multilingual communities. *Transactions of the Philological Society*, 189-212.
- Le Page, R. B., & Tabouret-Keller, A. (1985). *Acts of identity : Creole-based approaches to language and ethnicity*. New York: Cambridge University Press.
- Lightbown, P., & Spada, N. (2006). *How Languages are Learned?* (3rd Ed.). New York: Oxford University Press.
- Long, M. H. (1983). Linguistic and conversational adjustments to non-native speakers. *Studies in Second Language Acquisition*, 5, 177-194.
- Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. C. Ritchie & T. K. Bhatia (Eds.), *Handbook of language acquisition*. Vol. 2: Second language acquisition (pp. 413-468). New York: Academic
- MacIntyre, P., Clement, R., Dornyei, Z., & Noels, K. (1998). Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation. *The Modern language journal*, 82(4).

- Mackey, W. (2000). The description of bilingualism. In L. Wei, *The Biligualism Reader* (pp. 26-54). New York: Routledge.
- Maryland Department of Planning (2007), *Population growth trends in Maryland 2000-2006*. Retrieved May 10, 2009 from http://www.mdp.state.md.us/msdc/Power_Point_Presentation/Population_Growth_Trends_in_Maryland_2000-2006_3C.ppt
- Masgoret, A.-M., & Gardner, R. C. (2003). Attitudes, Motivation, and Second Language Learning: A Meta-Analysis of Studies Conducted by Gardner and Associates. *Language Learning*, 167-210.
- McCroskey, J. (1992). Reliability and Validity of the Willingness to Communicate Scale. *Communication Quarterly*, 40(1), 10.
- McGraw-Hill. (2009). LAS Links K-12 Assessments. Retrieved February 28, 2010
- McGroarty, M. (1996). *Language, attitudes, motivation and standards*: Cambridge University Press.
- Meichenbaum, D., & Biemiller, A. (1998). *Nurturing independent learners : helping students take charge of their learning*. Cambridge, Massachusetts: Brookline Books.
- National Heritage Language Resource Center. (2008, June 3). *What Is a Heritage Language, Olga Kagan?* Retrieved May 10, 2009, from National Heritage Language Resource Center: <http://www.international.ucla.edu/languages/nhlrc/news/article.asp?parentid=932>
- Norton Peirce, B. (1995). Social identity, investment, and language learning. *TESOL Quarterly*, 29, 9-31.
- Pearson, B. Z. (2007). Social Factors in Childhood Bilingualism in the United States. *Applied Psycholinguistics*, 28(3), 399.
- Pica, T. (1994). Research on negotiation: What does it reveal about second-language learning conditions, processes, and outcomes? *Language learning*, 44, 493-527
- Porter, R. P. (1990). *Forked tongue: The politics of bilingual education*. New York: Basic Books.
- Pousada, A. (2000). The competent bilingual in Puerto Rico. *International Journal of the Sociology of Language*, 142, 103.

- Reese, L., Goldenberg, C., & Saunders, W. (2006). Variations in Reading Achievement Among Spanish-Speaking Children in Different Language Programs: Explanations and Confounds. *The Elementary School Journal*, 363-386.
- Roberts, T. A. (2008). Home Storybook Reading in Primary or Second Language with Preschool Children: Evidence of Equal Effectiveness for Second-Language Vocabulary Acquisition. *Reading Research Quarterly*, 43(2), 28.
- Rosenshine, B., & Berliner, D. C. (1978). Academic Engaged Time. *British Journal of Teacher Education*, 3-16.
- Rumbaut, R. G. (1994). Origins and destinies: Immigration to the United States since World War II. *Sociological Forum*, 583-621
- Sachs, J., Bard, B., & Johnson, M. L. (1981). Language learning with restricted input: case studies of two hearing children of deaf parents. *Applied Psycholinguistics*, 2 (1), 33-54.
- Shenk, E. (2008). Choosing Spanish: Dual language immersion and familial ideologies. In M. a. Niño-Murcia, *Bilingualism and Identity* (pp. 221-256). Philadelphia: John Benjamins.
- Schoonbaert, S., Hartsuiker, R., & Pickering, M. (2007). The representation of lexical and syntactic information in bilinguals: Evidence from syntactic priming. *Journal of Memory and Language*, 56(2), 19.
- Sebastián-Gallés, N., Echeverría, S., & Bosch, L. (2005). The influence of initial exposure on lexical representation: Comparing early and simultaneous bilinguals. *Journal of Memory and Language*, 52(2), 16.
- Serna, C. (2004). *Writing in a bilingual classroom: Examining English and Spanish literacy development of fourth graders*. Thesis - University of California, Berkeley, Fall 2004.
- Sostre Rodríguez, M. (2005). *Language valorization and motivation to develop English*. Universidad de Puerto Rico, Recinto de Río Piedras: Unpublished manuscript.
- Spada, N., & Lightbown, P. M. (1999). Instruction, First Language Influence, and Developmental Readiness in Second Language Acquisition. *The Modern Language Journal*, 83(1), 22.
- Special Education. (2010). *Langley Park/McCormick Elementary School* Retrieved February 28, 2010, from <http://www1.pgcps.org/langleyparkmccormick/index.aspx?id=25206>
- Tajfel, H. (1974). Social identity and intergroup behaviour. *Social Science Information*,

Vol. 13(No. 2), 65-93.

U.S. Census Bureau (1993). The Hispanic Population in the United States. *Current Population Reports* (No. P20-475). Washington, DC: U.S. Government Printing Office.

U.S. Census Bureau. (2009, September 21). *Hispanic Population of the United States*. Retrieved December 20, 2009 from http://www.census.gov/population/www/socdemo/hispanic/hispanic_pop_presentation.html

Watanabe, Y., & Swain, M. (2007). Effects of proficiency differences and patterns of pair interaction on second language learning: collaborative dialogue between adult ESL learners. *Language Teaching Research*, 11(2), 22.

Wei, L. (2000). *The bilingualism reader* (Vol. xv). London ; New York: Routledge.

Glossary

additive bilingualism – L2 (immersion language) development does not negatively affect L1 (dominant language in society) skills

attitude toward a language – a personal view or opinion of the language

balanced bilingual – competency in both L1 and L2

bilingualism – “alternate use of two or more languages by the same individual” (Mackey, 2000)

bootstrapping – transferring grammatical concepts

code-switch – to switch to another language while using one

cognitive organization – the context in which a bilingual associates his or her language proficiency

competence – relative proficiency in a language

compound bilinguality – a speaker associates both of his/her languages with the same concept

coordinate bilinguality – a speaker has two different representations for two like concepts in L1 and L2

cultural assimilation and acculturation – culture shift as a result of intercultural contact

dominant bilingual – competency in primarily one language, usually L1

early sequential bilinguals – bilinguals who learn a second language at a young age

endogenous language – a language used as a mother tongue in a community and may or may not be used for official purposes

English as a Second Language (ESL) – a school program for students learning English as a second language

English skills or English proficiency – a student’s ability to comprehend spoken and written English and produce written English as measured by the LAS Links Assessment

ethnolinguistic identity – self-identification with a culture and its language

exogenous language – a language used in a formal, institutional setting, but not in the

community of the group using if officially

exposure – the availability of media around the students (not the extent to which students take advantage of the media available to them)

external factors – influences from the surrounding environment that affect the English proficiency of a student

external valorization – the value that society and people around the student place on English. Includes society's majority vs. minority language, parents' belief in the importance and value of English, and the encouragement or pressure from parents, teachers, and friends to learn English.

heritage Spanish speakers – bilinguals who learned Spanish in their childhood at home and are exposed to the dominant language of the United States, English, at school and in professional environments (National Heritage Language Resource Center)

input – receptive interaction

interaction – both receptive and productive interaction between the student and the people around the student

internal valorization – how much the student values English skills and how connected the student feels to a particular language. Includes confidence in relation to English, comfort level when using English, self-identification, motivation to learn English, and perception of value of learning English

Language Assessment Scales (LAS) Links Assessment – a standardized assessment that “accurately evaluate[s] reading, writing, listening, speaking, and comprehension skills of English language learners

late sequential bilinguals – bilinguals who learn a second language later in life

line of best fit – the best approximation for a data set by linear regression analysis

majority language – the standard and official language used by the majority of the population. A majority language has greater political power, privilege, and social prestige (Hinkel, 2005)

maternal language – the language of the child-directed speech of the mother

media – newspapers, movies, books, magazines, TV, radio, and the Internet

media exposure – the media surrounding the students, regardless of whether they engage with it

minority language – a language used by a minority of the population, with less political power, privilege, and social prestige

mixed-methods study – collecting both quantitative and qualitative data

motivation – the combination of desire and effort made to achieve a particular goal

native language (L1) – a language acquired since birth

productive interaction – two-way communication, such as conversations in which the student participates

p-value – a statistical measure that addresses the percentage of variance that is attributable to chance

qualitative data – having to do with qualities, not numerical values

quantitative data – having to do with numerical value

receptive interaction – one-way communication, such as conversations the student hears at home, school, and in the community

second language (L2) – a language learned after a native language

simultaneous bilinguals – bilinguals who acquire two languages from birth

socioeconomic status (SES) – the status of an individual in society as determined by their economic status

subtractive bilingualism – L2 (dominant language) usage decreases L1 (minority language) proficiency

valorization – the attribution of certain positive values to language as a functional tool, that is, as an instrument which will facilitate the fulfillment of communicative and cognitive functioning at all societal and individual levels (Hamers and Blanc)

willingness to communicate – the “predisposition toward approaching or avoiding the initiation of communication” (McCroskey, 1992)

Table 1

Average reading scale scores on the long-term trend National Assessment of Educational Progress (NAEP), by age and race/ethnicity: Various years, 1971-2004

Year	9-year-olds			13-year-olds			17-year-olds		
	White	Black	Hispanic	White	Black	Hispanic	White	Black	Hispanic
1971	214 ¹	170 ¹	—	261 ¹	222 ¹	—	291	239	—
1975	217	181	183	262	226	232	293	241	252
1980	221	189	190	264	233	237	293	243	261
1984	218	186	187	263	236	240	295	264	268
1988	218	189	194	261	243	240	295	274	271
1990	217	182	189	262	241	238	297	267	275
1992	218	185	192	266	238	239	297	261	271
1994	218	185	186	265	234	235	296	266	263
1996	220	191	195	266	234	238	295	266	265
1999	221	186	193	267	238	244	295	264	271
2004	226	200	205	266	244	242	293	264	264

— Not available.

¹ Data for 1971 include persons of Hispanic origin.

NOTE: The NAEP reading scores have been evaluated at certain performance levels. Scale ranges from 0 to 500. Students scoring 150 (or higher) are able to follow brief written directions and carry out simple, discrete reading tasks. Students scoring 200 are able to understand, combine ideas, and make inferences based on short uncomplicated passages about specific or sequentially related information. Students scoring 250 are able to search for specific information, interrelate ideas, and make generalizations about literature, science, and social studies materials. Students scoring 300 are able to find, understand, summarize, and explain relatively complicated literary and informational material. Includes public and private schools. Excludes persons not enrolled in school and those who were unable to be tested due to limited proficiency in English or due to a disability. Race categories exclude persons of Hispanic origin. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics (NCES). (2006). [Digest of Education Statistics, 2005](#) (NCES 2006-030), table 108, data from U.S.

Department of Education, NCES, National Assessment of Educational Progress (NAEP), various years, 1971–2004 Long-Term Trend Reading Assessment.

Table 2

Percentage distribution of students across NAEP reading achievement levels, by
race/ethnicity and grade: 2005

Grade and achievement level	Total¹	White	Black	Hispanic	Asian/ Pacific Islander	American Indian/ Alaska Native
<i>4th grade</i>						
Below basic	36	24	58	54	27	52
At basic	33	35	29	30	32	30
At or above proficient	32	41	13	16	42	18
At advanced	8	10	2	3	13	3
<i>8th grade</i>						
Below basic	27	18	48	44	20	41
At basic	42	43	40	41	40	41
At or above proficient	31	39	12	15	40	17
At advanced	3	4	1	1	6	1
<i>12th grade</i>						
Below basic	27	21	46	40	26	33
At basic	37	36	38	40	38	41
At or above proficient	35	43	16	20	36	26
At advanced	5	6	1	2	5	

¹ Interpret data with caution.

[‡] Reporting standards not met.

¹ Total includes other race/ethnicity categories not separately shown.

NOTE: NAEP reports data on student race/ethnicity based on information obtained from school rosters. Race categories exclude persons of Hispanic origin. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 Reading Assessment, NAEP Data Explorer.

Table 3

Percentage distribution of adults ages 25 and over according to highest level of educational attainment, by race/ethnicity: Selected years, 1990–2005

Race and year	Less than high school completion	High school completion or higher					Total
		Total	High school completion ¹	Some college	Associate's degree	Bachelor's degree	
White							
1990	18.6	81.4	39.8	18.5	—	13.4	9.7
1995	14.1	85.9	34.8	18.2	7.6	16.7	8.7
2000	11.6	88.4	34.1	17.9	8.4	18.6	9.5
2005	9.9	90.1	32.9	17.4	9.3	19.7	10.8
Black							
1990	33.8	66.2	37.2	17.7	—	6.8	4.5
1995	26.2	73.8	36.2	18.0	6.3	9.6	3.7
2000	21.1	78.9	35.3	20.1	6.8	11.5	5.1
2005	18.5	81.5	37.3	18.5	8.0	12.5	5.2
Hispanic							
1990	49.2	50.8	29.2	12.4	—	5.5	3.8
1995	46.6	53.4	26.3	13.2	4.6	6.2	2.7
2000	43.0	57.0	27.9	13.5	5.0	7.3	3.3
2005	41.5	58.5	27.6	13.3	5.6	8.5	3.5
Asian/Pacific Islander							
1990	19.6	80.4	26.2	14.3	—	24.2	15.6
1995	16.2	83.8	23.8	14.7	6.9	25.6	12.9
2000	14.3	85.7	22.0	12.4	7.0	28.9	15.4
2005	12.3	87.7	20.9	11.0	6.6	31.8	17.4
American Indian/Alaska Native							
1990	34.0	66.0	36.9	20.2	—	5.9	3.1
1995	27.3	72.7	36.3	18.6	7.8	7.3	2.8
2000	24.1	75.9	33.1	20.2	9.0	9.7	3.9
2005	24.2	75.8	31.6	19.2	10.6	10.3	4.2

¹ Interpret data with caution.

[†] Reporting standards not met.

[‡] Total includes other race/ethnicity categories not separately shown.

NOTE: NAEP reports data on student race/ethnicity based on information obtained from school rosters.

Race categories exclude persons of Hispanic origin. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 Reading Assessment, NAEP Data Explorer.

NOTE: Race categories exclude persons of Hispanic origin. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Commerce, Census Bureau, Current Population Survey (CPS), Annual Demographic Supplement 1990, 1995, and 2000, and Annual Social and Economic Supplement 2005.

Table 4

Median earnings for persons 25 years old and over, by educational attainment, sex, and race/ethnicity: 2005

Sex and race/ethnicity	Total	Less than high school completion	High school completion ¹	Some college or associate's degree	Bachelor's degree	Graduate degree ²
Total³	\$40,000	\$25,000	\$30,300	\$38,000	\$50,000	\$65,100
Male³	45,000	27,000	35,000	45,000	60,000	80,000
White	49,000	30,000	39,000	46,000	60,000	80,000
Black	35,000	23,000	28,400	38,000	45,000	61,000
Hispanic	31,000	25,000	28,000	39,000	49,000	65,000
Asian/Pacific Islander	50,000	25,000	30,000	35,000	55,000	81,000
American Indian/Alaska Native	40,000	30,000	35,000	41,000	55,000	
Female³	34,000	20,000	26,000	32,000	42,000	54,000
White	35,000	20,800	27,600	33,000	42,000	53,500
Black	30,000	18,700	24,000	30,000	45,000	52,000
Hispanic	27,000	19,000	23,000	30,000	38,000	50,800
Asian/Pacific Islander	38,000	22,500	25,000	32,000	43,600	62,000
American Indian/Alaska Native	28,000	18,000	22,000	28,000	40,000	40,000
‡ Reporting standards not met. † Interpret data with caution. 1 Includes equivalency. 2 A master's, doctor's, or first-professional degree. 3 Includes persons of more than one race, not separately shown. NOTE: Race categories exclude persons of Hispanic origin. SOURCE: U.S. Department of Commerce, Census Bureau, Current Population Survey, Annual Social and Economic Supplement, 2006.						

Table 5

Summary table of psychological dimensions of bilinguality

Dimension	Type of Bilinguality	Comments
1. according to competence in both languages	(a) balanced bilinguality (b) dominant bilinguality	LA/1 competence = LB/2 competence LA/1 competence > or < LB/2 competence
2. according to cognitive organization	(a) compound bilinguality (b) coordinate bilinguality	LA/1 unit equivalent to LB/2 unit = one conceptual unit LA/1 unit = one conceptual unit 1 LB/2 equivalent = one conceptual unit 2
3. according to age of acquisition	(a) childhood bilinguality (i) simultaneous (ii) consecutive (b) adolescent bilinguality (c) adult bilinguality	LB/2 acquired before age of 10/11 LA and LB = mother tongues L1 = mother tongue; L2 acquired before 11 L2 = acquired between 11 and 17 L2 = acquired after 17
4. according to presence of L2 community in environment	(a) endogenous bilinguality (b) exogenous bilinguality	presence of L2 community absence of L2 community
5. according to the relative status of the two languages	(a) additive bilinguality (b) subtractive bilinguality	LA/1 and LB/2 socially valorized ® cognitive advantage L2 valorised at expense L1 ® cognitive disadvantage
6. according to group membership and cultural identity	(a) bicultural bilinguality (b) L1 monocultural bilinguality (c) L2 acculturated bilinguality (d) deculturated bilinguality	double membership and bicultural identity LA/1 membership and cultural identity LB/2 membership and cultural identity ambiguous membership and anomic identity

L1 - Denotes the mother tongue or first language

L2 - Denotes a second language learned after the first

LA/LB - Denotes the cooccurrence of two mother tongues learned simultaneously

SOURCE: Hamers & Blanc (2004)

Table 6

Survey questions by topic

Category	Student Survey (Appendix XX)	Parent Survey (Appendix XX)
One-way interactions	II_A_1, II_A_2	I_1, I_2, I_3, IV_4
Two-way interactions	II_B_1, II_B_2, II_C_1, II_C_2, II_C_3, II_C_4, II_C_5, II_C_6, II_C_7, II_C_8, II_C_9	II_1, II_2, III_2, IV_1
Media exposure	II_D_1, II_D_2, II_D_3, II_D_4, II_D_5	II_3, III_1
Internal valorization	III_A_1, III_A_2, III_A_3, III_A_4, III_B_1, III_B_2, III_B_3, III_B_4, III_B_5	IV_2, IV_3, IV_5, IV_6
External valorization	III_B_6, III_C_1, III_C_2, III_C_3, III_C_4	V_1, V_3, V_6

Appendices

Appendix A

Parent Survey

Section I:

Please circle the answer that best describes you, your family, and your household.

1. What is the primary language of communication between your child and the following family members?

	All English	Mostly English	Some English/Some Other	Mostly Other	All Other	Not Applicable	If “Other” selected, please specify the other language:
Between you and your child	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Between your spouse and your child	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Between your children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Between your children and their grandparents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____

2. How many hours per day does your child talk with adults in the household?

- A) 0 hours
- B) 1 – 2 hours
- C) 3 – 4 hours
- D) 5 – 6 hours
- E) 7+ hours

3. How many hours per day is your child playing with an adult in the household?

- A) 0 hours
- B) 1 – 2 hours
- C) 3 – 4 hours
- D) 5 – 6 hours
- E) 7+ hours

Section II:

The following questions ask about your community. Please circle the ONE answer that applies.

1. How would you classify the language environment in the neighborhood where you live?

- A) All English
- B) Mostly English
- C) Some English/Some Other
- D) Mostly Other
- E) All Other

If "Other", specify what language other is: _____

2. How would you classify the language spoken in public places in your community (e.g. park, grocery, community center, etc.)?

- A) All English
- B) Mostly English
- C) Some English/Some Other
- D) Mostly Other
- E) All Other

If "Other", specify what language other is: _____

3. What is the primary language of *written* communication in public places in your community (e.g. signs, posters, neighborhood newspaper, etc.)?

- A) All English
- B) Mostly English
- C) Some English/Some Other
- D) Mostly Other
- E) All Other

If "Other", specify what language other is: _____

Section III:

The following are questions that ask about when you use a certain language. Please select the **ONE** the answers that applies.

1. In what language(s) are the following items available in your home?

	All English	Mostly English	Some English/Some Other	Mostly Other	All Other	Not Applicable	If "Other" selected, please specify what language other is:
Books	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Magazines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Newspapers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Movies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Television	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____

2. In what language(s) do YOU communicate with the following people?

	All English	Mostly English	Some English/Some Other	Mostly Other	All Other	Not Applicable	If other selected, please specify what language other is:
My parents (children's grandparents)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
My siblings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
My neighbors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Teachers or administrators at my child's school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Community members at church or other settings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____

Section IV:

The following are questions that ask about how often you use a certain language. Please circle the **ONE** answer that applies.

1. Overall, I use

	Never	Rarely	Sometimes	Often	Always
English	1	2	3	4	5
Other: _____	1	2	3	4	5

2. I feel confident speaking in

	Never	Rarely	Sometimes	Often	Always
English	1	2	3	4	5
Other: _____	1	2	3	4	5

3. I feel that it is helpful to know

	Never	Rarely	Sometimes	Often	Always
English	1	2	3	4	5
Other: _____	1	2	3	4	5

4. At home, my children use

	Never	Rarely	Sometimes	Often	Always
English	1	2	3	4	5
Other: _____	1	2	3	4	5

5. At home, I would like my child to use

	Never	Rarely	Sometimes	Often	Always
English	1	2	3	4	5
Other: _____	1	2	3	4	5

6. At school, I would like my child to use

	Never	Rarely	Sometimes	Often	Always
English	1	2	3	4	5
Other: _____	1	2	3	4	5

Section V:

Following are a number of statements with which you may agree or disagree. We would like you to indicate your opinion after each statement by circling the choice that best indicates the extent to which you agree or disagree with the statement.

1. In my community I think it is important to know English.

Strongly Agree Agree Feel indifferent Disagree Strongly Disagree

2. In my community I think it is important to know another language besides English. Please specify the other language (if applicable): _____

Strongly Agree Agree Feel indifferent Disagree Strongly Disagree

3. My child feels pressured by my community to use English.

Strongly Agree Agree Feel indifferent Disagree Strongly Disagree

4. My child feels pressured by my community to use another language besides English. Please specify the other language (if applicable): _____

Strongly Agree Agree Feel indifferent Disagree Strongly Disagree

5. My child feels encouraged by my community to use English.

Strongly Agree Agree Feel indifferent Disagree Strongly Disagree

6. My child feels encouraged by my community to use another language besides English. Please specify the other language (if applicable): _____

Strongly Agree Agree Feel indifferent Disagree Strongly Disagree

Section VI:

Please answer the following questions as completely as possible.

- 1. How would you assess the quality of your child's overall education at their elementary school?**

- 2. How would you assess the quality of your child's language education at their elementary school?**

- 3. What language(s) do you speak?** _____

- 4. For any non-English languages, please specify dialect, ex: Spanish-Ecuador**

- 5. How do you identify yourself? For Example: American, Puerto Rican, Chinese, Chinese American etc.** _____

Encuesta De Los Padres

Este estudio está siendo conducido por el equipo de Adquisición de Gramática por Estudiantes Bilingües (GABS), equipo de estudio del programa de honores de Gemstone en la Universidad de Maryland, College Park. Para este estudio nosotros le pedimos que responda a las siguientes preguntas que conciernen al uso del español y al inglés en casa. Esto no es una evaluación. Así, esto no tiene respuestas incorrectas, y usted no deberá escribir su nombre en el estudio. A cambio, por favor escriba el número de identificación que nosotros le hemos dado. Si usted no recuerda el número, por favor pídaselo al facilitador del estudio. Por favor responda a todas las preguntas honesta y completamente. Muchas gracias por su ayuda.

Sección I:

Por favor señale la respuesta que más lo describe a usted, su familia, y su hogar.

4. ¿Cuál es el primer lenguaje de comunicación entre su hijo y los siguientes miembros de la familias?

	Todo en Ingles	Casi todo en ingles	Algún Ingles/Algún Otro	Casi todo en otro	Todo en otro	No aplica	Si "Otro" es seleccionado, especifique cual:
Entre usted y su hijo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Entre su esposa y su hijo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Entre sus hijos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Entre sus hijos y sus ábrelos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____

5. Cuantas horas al día su hijo habla con adultos en su hogar?

- F) 0 horas
- G) 1 – 2 horas
- H) 3 – 4 horas
- I) 5 – 6 horas
- J) 7+ horas

6. Cuantas horas al día su hijo juega con un adulto al día en su hogar?

- F) 0 horas
- G) 1 – 2 horas
- H) 3 – 4 horas
- I) 5 – 6 horas

J) 7+ horas

Sección II:

Las siguientes preguntas son sobre su comunidad. Por favor seleccione UNA de las respuestas.

4. Como clasifica usted el entorno de el lenguaje en el vecindario que usted vive?

- F) Todo Ingles
- G) La mayoría Ingles
- H) Algún Ingles/Algún Otro
- I) La mayoría otro
- J) Todo otro

Si “otro”, especifique que otra lengua es: _____

5. Como clasificaría el lenguaje hablado en lugares públicos de su comunidad (por ejemplo parque, tiendas, centros comunitarios, etc.)?

- A) Todo Ingles
- B) La mayoría Ingles
- C) Algún Ingles/Algún Otro
- D) La mayoría otro
- E) Todo otro

Si “otro”, especifique que otra lengua es: _____

6. Cual es el primer lenguaje de comunicación escrita en los lugares públicos de su comunidad (por ejemplo avisos, afiches, periódicos, etc.)?

- A) Todo Ingles
- B) La mayoría Ingles
- C) Algún Ingles/Algún Otro
- D) La mayoría otro
- E) Todo otro

Si “otro”, especifique que otra lengua es: _____

Sección III:

Las siguientes son preguntas que se hacen acerca de cuando usted usa un cierto lenguaje. Por favor seleccione UNA de las respuestas que aplican.

3. En que lenguaje(s) están los siguientes ítems disponibles en su casa?

Todo Ingles	Mayoría Ingles	Algún Ingles/Algún Otro	Mayoría otro	Todo Otro	No Aplica	Si “Otro” es seleccionado, especifique cual es
----------------	-------------------	-------------------------------	-----------------	--------------	-----------	--

Libros	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	el lenguaje:
Revistas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Periódicos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Películas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Televisión	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____

4. En que lenguaje(s) usted se comunica con las siguientes personas?

	Todo Ingles	Mayoría Ingles	Algún Ingles/Algún Otro	Mayoría otro	Todo Otro	No Aplica	Si “Otro” es seleccionado, especifique cual es el lenguaje:
Mis padres (abuelos de su hijos)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Mis hermanos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Mis vecinos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Profesores y Administradores de mis hijos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Miembros de la comunidad en la iglesia o otros lugares	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____

Sección IV:

Las siguientes son preguntas para pedir que tan amenudeo usted usa un cierto lenguaje.
Por favor circulo una de respuestas que aplica.

7. En todo, yo uso

	Nunca	Raramente	Algunas Veces	A menudo	Siempre
Ingles	1	2	3	4	5
Otro: _____	1	2	3	4	5

8. Yo me siento seguro hablando en

	Nunca	Raramente	Algunas Veces	A menudo	Siempre
Ingles	1	2	3	4	5
Otro: _____	1	2	3	4	5

9. Yo siento que es útil saber

	Nunca	Raramente	Algunas Veces	A menudo	Siempre
Ingles	1	2	3	4	5
Otro: _____	1	2	3	4	5

10. En la casa, mis hijos usan

	Nunca	Raramente	Algunas Veces	A menudo	Siempre
Ingles	1	2	3	4	5
Otro: _____	1	2	3	4	5

11. En la casa, me gustaría que mis hijos usaran

	Nunca	Raramente	Algunas Veces	A menudo	Siempre
Ingles	1	2	3	4	5
Otro: _____	1	2	3	4	5

12. En la escuela, me gustaría que mis hijos usaran

	Nunca	Raramente	Algunas Veces	A menudo	Siempre
Ingles	1	2	3	4	5
Otro: _____	1	2	3	4	5

Sección V:

Las siguientes son un número de situaciones en las que usted puede estar de acuerdo o desacuerdo. Nos gustaría que indicara su opinión después de cada situación seleccionando con un círculo lo que mejor indique si usted está de acuerdo o desacuerdo.

7. En my comunidad yo pienso que es importante saber ingles.

Extremadamente de Acuerdo	De Acuerdo	Indiferente
Desacuerdo	Extremadamente desacuerdo	

8. En my comunidad yo pienso que es importante saber otro lenguaje a parte de ingles. Especifique el otro lenguaje (si aplica): _____

Extremadamente de Acuerdo	De Acuerdo	Indiferente
Desacuerdo	Extremadamente desacuerdo	

9. Mis hijos sienten presión por la comunidad para usar ingles.

Extremadamente de Acuerdo	De Acuerdo	Indiferente
Desacuerdo	Extremadamente desacuerdo	

10. Mis hijos se sienten presionados por la comunidad para usar otro lenguaje a parte de ingles. Especifique el otro idioma (si aplica): _____

Extremadamente de Acuerdo	De Acuerdo	Indiferente
Desacuerdo	Extremadamente desacuerdo	

11. Mis hijos se sienten animados por mi comunidad para usar ingles.

Extremadamente de Acuerdo	De Acuerdo	Indiferente
Desacuerdo	Extremadamente desacuerdo	

12. Mis hijos se sienten animados por mi comunidad para hablar otro idioma a parte de ingles. Especifique el otro idioma (si aplica): _____

Extremadamente de Acuerdo	De Acuerdo	Indiferente
Desacuerdo	Extremadamente desacuerdo	

Sección VI:

Por favor conteste las siguientes preguntas lo mas completamente posible.

6. Como valoraría usted la calidad de la educación de sus hijos en la escuela elemental?

7. Como valoraría usted la calidad de la enseñanza de lenguaje de la de la escuela elemental?

8. Que idioma(s) usted hablas? _____

9. Si alguno no es ingles, por favor especifique su idioma y de donde proviene.

10. Como se identificaría usted? Por ejemplo: Americanos, Puerto Riquenos, Chinos, Chino-Americanos, etc. _____ -

Gracias por tomar esta evaluación! Su ayuda es gratamente apreciada!

Appendix B

Student Survey

I. Background Questions

Please answer the following questions that ask you about background.

1. How old are you?
2. What is your gender? _____ Female _____ Male
3. How many years have you been in the United States?
4. How many years have you been in school in the United States?
5. What language(s) do you speak? _____
6. What is your native language? _____
7. What is your country of origin? _____
8. What is your nationality? _____

II. Language Use

A. The following are a number of questions which ask where you use a language. Please mark all that apply with an 'X'.

1. I usually use English when I'm
At home _____
At school _____
With my friends _____
In public _____
In church/place of worship _____
2. I usually use another language (other than English) when I'm
At home _____
At school _____
With my friends _____
In public _____
In church/place of worship _____

Please specify the other language _____

B. The following are questions that ask about when you use a certain language. Please circle ALL the answers that apply.

1. I enjoy using English when talking with

My friends at home My friends at school My parents My brothers/sisters

My grandparents My neighbors People at school NONE

2. I enjoy using another language (other than English) when talking with

My friends at home My friends at school My parents My brothers/sisters

My grandparents My neighbors People at school NONE

Please specify the other language _____

C. The following are questions that ask about how often you use a certain language. Please circle the choice that best fits your own viewpoint or opinion.

1. I speak to my friends in English:

Always Most of the time Sometimes Rarely Never

2. I speak to my friends in another language (other than English):

Always Most of the time Sometimes Rarely Never

3. My friends speak in English:

Always Most of the time Sometimes Rarely Never

4. My friends speak in another language (other than English):

Always Most of the time Sometimes Rarely Never

5. When talking with my teacher, I speak English:

Always Most of the time Sometimes Rarely Never

6. When talking with my teacher, I speak another language (other than English):

Always Most of the time Sometimes Rarely Never

7. During recess I play with kids who speak English:

Always Most of the time Sometimes Rarely Never

8. During recess I play with kids who speak another language (other than English):

Always Most of the time Sometimes Rarely Never

9. I speak English at school:

Always Most of the time Sometimes Rarely Never

D. Please answer the following questions about materials found in your home:

1. At my home, I read/own books in

English only English mostly Both Other mostly Other only N/A

Please specify Other_____

2. At my home, I read/own magazines

English only English mostly Both Other mostly Other only N/A

Please specify Other_____

3. At my home, the newspapers we receive are in

English only English mostly Both Other mostly Other only N/A

Please specify Other_____

4. At my home, I listen to radio in

English only English mostly Both Other mostly Other only N/A

Please specify Other_____

5. At my home, I watch TV in

English only English mostly Both Other mostly Other only N/A

Please specify Other_____

III. Attitudes towards Languages

A. Following are a number of situations in which some people feel confident and others do not. We would like you to indicate your opinion after each statement by circling the choice that best indicates the extent to which you feel confident.

1. When I speak English at home, I feel

Very nervous Nervous Neutral Confident Very Confident N/A

2. When I speak another language (other than English) at home, I feel

Very nervous Nervous Neutral Confident Very Confident N/A

Please specify Other _____

3. When I speak English at school I feel

Very nervous Nervous Neutral Confident Very Confident N/A

4. When I speak another language (other than English) at school, I feel

Very nervous Nervous Neutral Confident Very Confident N/A

Please specify Other _____

B. The following are questions that ask about when you use a certain language. Please circle the ONE answer that applies.

1. In general, what language do you tend to use?

English only English mostly Both Other mostly Other only N/A

Please specify Other _____

2. In what language do you feel more confident?

English only English mostly Both Other mostly Other only N/A

Please specify Other _____

3. In general, what language do you prefer to use?

English only English mostly Both Other mostly Other only N/A

Please specify Other_____

4. What language do you think is more helpful to learn?

English only English mostly Both Other mostly Other only N/A

Please specify Other_____

5. In general, what language do you feel more comfortable using?

English only English mostly Both Other mostly Other only N/A

Please specify Other_____

6. At home, what language do your parents/guardians use?

English only English mostly Both Other mostly Other only N/A

Please specify Other_____

C. Following are a number of statements with which you may agree or disagree. We would like you to circle the choice that best indicates the extent to which you agree or disagree with the statement.

1. I feel pressured by my parents/guardians to use English.

Strongly Agree Agree Neutral Disagree Strongly Disagree

2. I feel pressured by my parents/guardians to use another language (besides English)

Strongly Agree Agree Neutral Disagree Strongly Disagree

Please specify the other language_____

3. I feel encouraged by my parents/guardians to use English.

Strongly Agree Agree Neutral Disagree Strongly Disagree

4. I feel encouraged by my parents/guardians to use Spanish.

Strongly Agree Agree Neutral Disagree Strongly Disagree

Please specify the other language_____

IV. Short Answers

A. For the following questions, please answer the question accurately in a sentence or so. There are no wrong answers.

Example: Question: What is your favorite color? Why?

Answer: My favorite color is blue. It reminds me of the beautiful skies and ocean.

1. Do some students in your class have trouble speaking English? _____

2. If you answered “yes” above, does this slow down the class or make learning difficult for you?

3. Do students who are bilingual help other bilingual students with their classwork?

4. How does your teacher make learning fun, especially learning about language arts or reading?

5. How do teachers help you understand English when you’re confused?

6. Do you feel embarrassed when you make mistakes during class?

7. Do kids make fun of you because of the way you speak? If so, why?

-
-
8. Do you take any ESOL classes, or have you taken any in the past?
-
-
-
-

B. Please explain the following to the best of your ability. You don't have to fill up all the lines, and there are no wrong answers.

1. In school, do you go to field trips or attend assemblies that help you to explore other cultures? Please explain.

2. What about the books you read or the videos you watch at school? Do you feel that they expose you to characters whose cultures you can relate to?

3. Are there any other activities or programs that value different cultures at your school?

4. What activities do you do when you stay at school after class?

Appendix C

Teacher Survey.

Instructions: Please answer ***each*** question completely and thoroughly to the best of your knowledge in the space provided below each question. If you need more room to write please continue on the back of the page.

Example:

Question: Do your students have a regular reading time scheduled?

Answer: Yes, they have a supervised 'Drop Everything and Read' time allotted every Tuesday and Thursday from 10-11 AM.

Section I

1. Do your students have a regular reading time scheduled? If yes, what languages do the students read during this time? Please describe the session.

2. Do you take your students on library visits? If yes, how often are the library visits? If no, skip to question 4.

3. What activities are the students involved in during their library visits? How does the library serve students whose first language is not English? Does the library have books in languages other than English? Are students encouraged to check out books in both languages? What is the balance between the English books and books in other languages?

4. How do you help the students establish an awareness of languages? (Examples: Draw attention to cognates, relying on contrastive analysis, i.e. point out similarities/differences between English and Spanish)

5. Do the students have the opportunity to learn about multi-cultural awareness? If so, could you please describe these cultural activities?

6. Do you believe students' performance on tests is representative of their understanding of the subject? Why or why not?

7. According to statistics published by the National Center of Education Statistics, Hispanic students are performing below average in the area of English reading. Do you see this trend in your classroom? If so, to what do you attribute this disparity?

8. Do you think the bilingual education program/ESOL program at your school is effective? If not, how would you suggest your school address the needs of its bilingual student/heritage learner population?

Section II

1. Do you have bilingual students or students who are heritage learners (students who are raised with a language other than English at home) in your class? If yes, how comfortable do you feel teaching these students? If no, please skip to question 4.

2. Do the bilingual students or heritage learners in your class help out other struggling bilingual students or heritage learners who speak the same language (besides English)?

3. Have you observed any difference between the motivation to learn between your bilingual students/heritage learners and your monolingual students? If yes, please explain the difference in detail.

4. Do you feel that students from all ethnic backgrounds are friends with each other, or do students from certain ethnic groups tend to band together? Please describe.

5. In your opinion, how does the language that a student's family speaks at home affect that student's academic performance and school life?

Section III

1. Have you had the opportunity to attend workshops in bilingual education? If so, please briefly describe.

2. Are you bilingual? If so, what languages do you speak?

3. If you speak a language besides English, can you read and/or write in this language? Do you use this skill in your teaching? If so, how?

4. If you speak a language besides English, how would you describe your speaking proficiency?

☐ Beginner

☐ Intermediate

☐ Fluent (non-native)

☐ Native

Appendix D

Student Interview Protocol

Welcome the student into the room and direct him/her to a seat. Once the student has entered the room and is comfortably sitting in his/her chair, ask him whether he/she objects to having a tape recorder on during the interview. If the student does not object, turn on recorder.

Start the interview with a few basic questions to make the students feel more comfortable. This will include asking simple questions such as:

- How are you?
- What activities do you like to participate in after school? On weekends?
 - Use their response to ask some follow up questions that gets them to start talking and feeling comfortable
- What is your favorite class? Why?
- What is your favorite book?
- What is your favorite TV show?

Once the students start feeling comfortable and start talking, head into some deeper questions in relation to bilingualism, Spanish, and Latino culture. Some of the questions that can be used as a guide for this are as follows:

- Do you participate in after school activities? Before school activities?
- Who do you hang out with at school? Do you tend to speak Spanish or English with your friends?
- Do you prefer to speak one language over another at school? If so, why? Is this different from what you do at home?
- How do you feel when you speak English/Spanish at school? Why?
- Do students in your class have difficulty with English? Who helps them?
- How do you choose when to use English/Spanish at school? Why?
- Do you think your school supports your Latino culture?
 - Follow-up: Field trips you have been on, books you have read, and other school activities.
- Do you learn about different cultures at school?

These questions are just meant to be a basic guide, and the interviewer should deviate from the guide if it seems appropriate based on the student's comfort level and interest in particular questions.

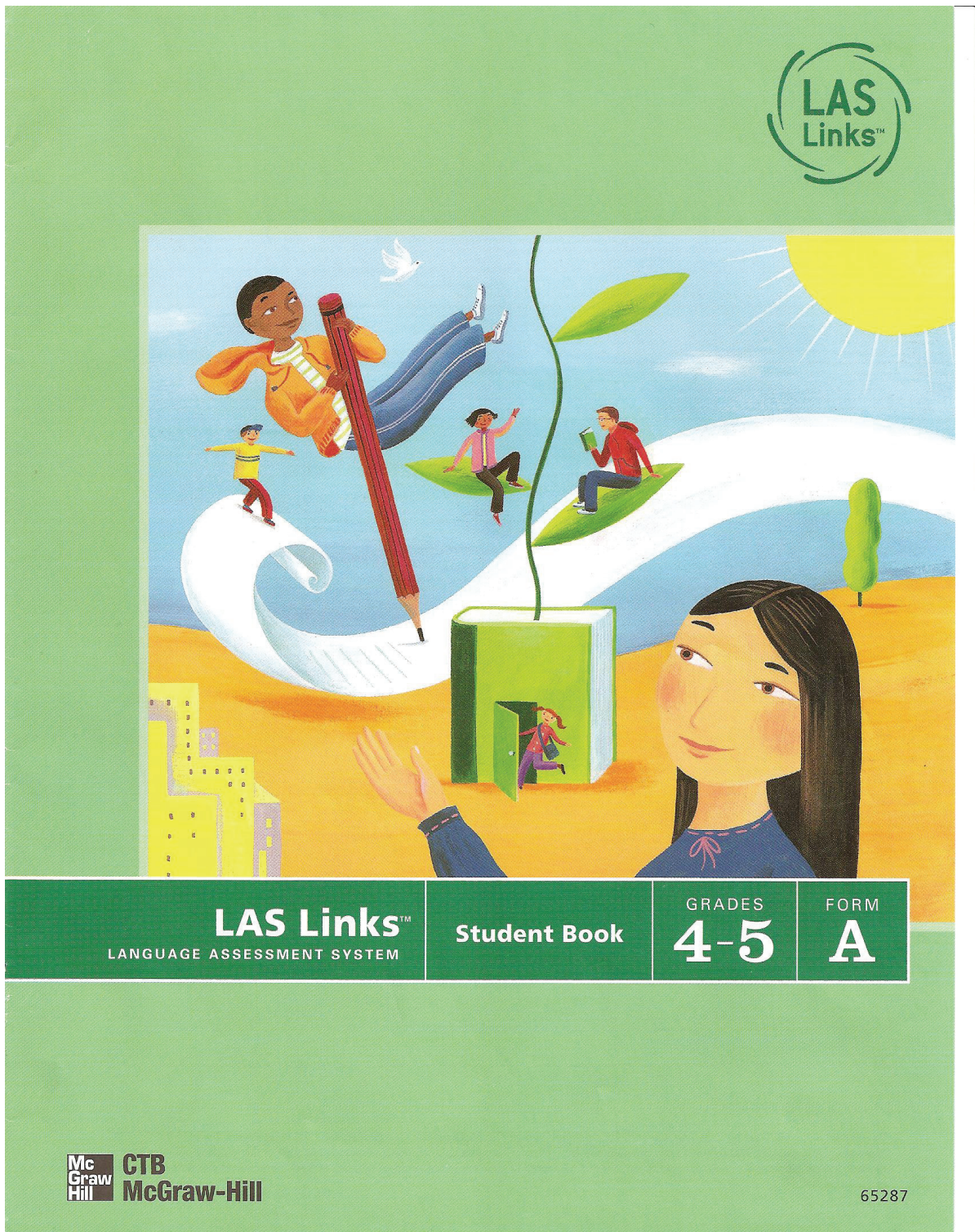
After discussing the topics mentioned in the questions above, the interview will wrap up with some general questions that divert the minds of the students away from the issues in the questions above. This can include a discussion of the students' interests, activities that they are excited about, sports they like, favorite music, etc.

Overall, the whole interview will be extremely informal and the comfort level of the students being interviewed will always be kept in mind. The interview will not feel like an interrogation; instead, it will feel like a friendly discussion.

- Do you participate in after school activities? Before school activities?
- Who do you hang out with at school? Do you tend to speak Spanish or English with your friends?
- Do you prefer to speak one language over another at school? If so, why? Is this different from what you do at home?
- How do you feel when you speak English/Spanish at school? Why?
- Do students in your class have difficulty with English? Who helps them?
- How do you choose when to use English/Spanish at school? Why?
- Do you think your school supports your Latino culture?
 - Follow-up: Field trips you have been on, books you have read, and other school activities.
- Do you learn about different cultures at school?
- Do you learn about your culture at school?
- Where is your family from?
 - Do you consider yourself to be from X county or from the US?
- Do you feel more closely attached to American culture or X country's culture? Why?
- What kind of TV shows do you watch?
 - English cartoons v. Spanish cartoons
- What holidays do you celebrate?
- Who is your role model? What do you like about this person?
- Have you gone back to your home country? Would you like to go back (again)?
 - What do you like about your home country? What do you not like?
 - What do you miss about your home country?
- Do your parents tell you stories about your home country?

Appendix E

LAS Links Assessment



LISTENING *Listen for Information*

Practice A

- A Find a science book.
- B Use an encyclopedia.
- C Complete Chapter 2.

STOP 

- | | |
|---|---|
| <p>1 A Write a summary of the information.</p> <p>B Find the information on the paper.</p> <p>C Tell me the information you summarize.</p>
<p>2 A Round off numbers after you add them.</p> <p>B Add numbers and round off the answer.</p> <p>C Round off numbers before you add them.</p>
<p>3 A Find the green states.</p> <p>B Color some states green.</p> <p>C Draw the 13 original states.</p> | <p>4 A Find the size of Jupiter.</p> <p>B Find the science book about Jupiter.</p> <p>C Look at the picture of Jupiter in your science book.</p>
<p>5 A Draw pictures of insects.</p> <p>B Sort all the picture cards.</p> <p>C Find the cards showing insects.</p>
<p>6 A Paint with two colors.</p> <p>B Choose three colors.</p> <p>C Mix two colors.</p> |
|---|---|

-
- 7 A Find "bright" in the dictionary.
B Put the dictionaries on the shelf.
C Use the word "bright" in a sentence.
- 8 A Draw a map of the solar system.
B Find Planet X on the map.
C Put an X on a planet.

- 9 A Put the numbers in columns.
B Add two columns of numbers.
C Find the total of one of the columns.
- 10 A Find the ZIP code on the letter.
B Seal your letter inside the envelope.
C Put the ZIP code and a stamp on the envelope.



LISTENING *Listen in the Classroom*

Practice B

- A apples
- B juice
- C pizza

STOP 

Visiting Expert

- 11 A working on a farm
B life on a ranch
C growing hay
- 12 A as an adult
B in the fourth grade
C when he got his job
- 13 A in the field
B on the farm
C in the barn

Making Oil Lamps

- 14 A clay
B glass
C metal
- 15 A pour oil
B add a spout
C roll clay coils
- 16 A a tea pot
B a tea cup
C a flower pot

STOP 

LISTENING *Listen and Comprehend*

The Venus Flytrap

- | | |
|--|--|
| <p>17 A why a plant has tiny hairs
B how a plant catches insects
C how often a plant eats insects</p> <p>18 A when the plant's leaf closes
B when tiny hairs appear
C when the flytrap opens</p> | <p>19 A one week
B ten days
C one month</p> <p>20 A An insect touches the tiny hairs.
B The flytrap is ready for its next meal.
C An insect comes near a Venus flytrap leaf.</p> |
|--|--|

STOP 

Listening 7

READING *Analyze Words*

Practice A

Which shows the word instructor divided correctly into root word and suffix?

- A instruct | or
- B instruc | tor
- C in | structor

Practice B

If educate means "teach," then educator means

- A teach over again
- B someone who teaches
- C not ever teaching

STOP 

Directions: Do Numbers 1 through 10.

1 Which word rhymes with laugh?

- A staff
- B path
- C cough

2 Which shows the word unlikely divided correctly into syllables?

- A un • likely
- B unlike • ly
- C un • like • ly

3 Which shows the word furry divided correctly into syllables?

- A fu • rry
- B furr • y
- C fur • ry

4 Which word means "spell incorrectly"?

- A respell
- B misspell
- C spellable

5 Which shows the word treatment divided correctly into root word and suffix?

- A treatm|ent
- B trea|tment
- C treat|ment

6 Which shows the word helpless divided correctly into root word and suffix?

- A he|lpless
- B help|less
- C help|less

7 Which word means "can be liked"?

- A likable
- B likely
- C likeness

8 If start means "begin," then restart means

- A not begin
- B begin early
- C begin again

9 If approve means "permit," then disapprove means

- A permitted
- B not permit
- C permit again

10 If frequent means "often," then infrequent means

- A so often
- B too often
- C not often

STOP 

Reading 9

READING *Read Words*

Practice C

Choose the word that means the SAME or nearly the same as the underlined word.

The teacher announced that there would be a test today.

- A stated
- B guessed
- C forgot



Directions: For Numbers 11 through 15, choose the word that BEST completes the sentence.

- 11 The boy took the shortest _____ to school.

- A route
- B rope
- C row

- 12 Birds sat on the _____ of the president in the park.

- A fence
- B speech
- C statue

- 13 George had a good _____ for being late to class.

- A grade
- B excuse
- C assignment

- 14 We put the clean dishes in the _____.

- A cupboard
- B dresser
- C sink

- 15 Every morning, Henry eats a _____ of cereal and milk for breakfast.

A bottle
B bowl
C plate

Directions: For Numbers 16 through 20, choose the word that means the SAME or nearly the same as the underlined word.

- 16 The cow eats hay in the meadow.

A barn
B field
C garden

- 17 Selena is prepared. School starts tomorrow.

A nervous
B tired
C ready

- 18 The bashful student was nervous about speaking in front of the class.

A calm
B loud
C shy

- 19 Children leap into the cold pond.

A jump
B slide
C swim

- 20 Ari's swift model car might win the race.

A shiny
B speedy
C sudden

STOP 

Reading 11

A Science Museum Field Trip

Ms. Carter's class waited for the bus to take them back to school after the field trip.

"What was your favorite part of the Science Museum?" Ms. Carter asked.

Sara raised her hand. "The planetarium," she said. "I loved seeing the planets and the stars."

Eric said, "That was okay, but I'd rather see them in the real sky through a telescope."

Trina liked the robotic hand that was able to pick up an egg. "I like how you could open and close the hand with a computer. And you had to control the pressure so the egg didn't break."

Ms. Carter asked, "Who wants to come back next year?"

They all raised their hands.

"I guess that's one thing you all agree on!" she said with a smile.

Practice D

What did the class see in the planetarium?

- A images of planets and stars
- B real planets and stars in the sky
- C rockets and spaceships
- D plants and trees

Practice E

On what did they all agree?

- A The robot's hand was more interesting.
- B The planetarium was more interesting.
- C They all wanted to come back next year.
- D They all wanted to go somewhere else next year.

STOP 

Directions: Read the article. Then do Numbers 21 through 25.

Water's Never-Ending Journey

Imagine traveling back and forth between the earth and the sky on a never-ending journey. This is what water does during the water cycle.

When rain falls, some of it lands in oceans, lakes, and streams. Some of it soaks into the ground. Over time, the warm sun causes the water to evaporate. This means that the water changes to water vapor. The water vapor rises, drifting up into the sky.

In the cold air, the vapor becomes tiny drops of water that form clouds. When the drops of water become too heavy for the clouds to hold, the clouds burst. That brings the water back to the earth as rain, hail, or snow.

Soon, the water evaporates, and the water cycle continues.



21 What is this article MOSTLY about?

- A hail and snow
- B clouds and earth
- C streams and rivers
- D evaporation and rain

22 What causes water to turn into vapor?

- A oceans, lakes, and streams
- B rain, hail, or snow
- C heavy clouds
- D warm sun

23 What makes water return to the earth?

- A The clouds become heavy with water.
- B The water vapor rises quickly.
- C The water changes to vapor.
- D The sun warms the water.

24 How might this article be used?

- A to write a story about a storm
- B to do a report on evaporation
- C to draw a picture of a cloud
- D to predict the weather

25 Read this sentence from the article.

In the cold air, the vapor becomes tiny drops of water that form clouds.

Which word means the SAME or nearly the same as form?

- A burst
- B make
- C move
- D warm

Directions: Read the recipe. Then do Numbers 26 through 30.

Tortilla Wraps

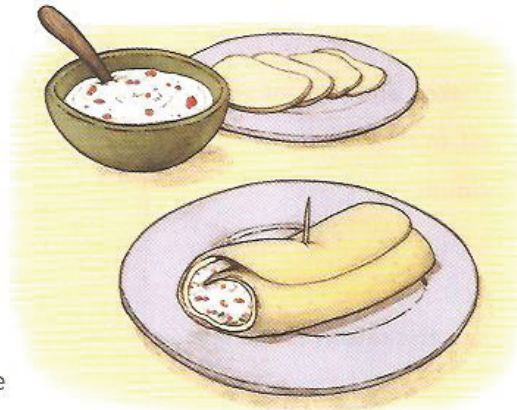
You can make great party treats by wrapping tortillas around your favorite foods. They are called *wraps* and they are fun to make and to eat! Follow the directions below. You can change the fillings to create your own special wraps.

Equipment

- Measuring cup
- Measuring spoons
- Mixing bowl
- Spoon
- Toothpicks

Ingredients

- 1 cup shredded cheese
- 1 tomato, chopped
- 4 tablespoons sour cream
- 5 flour tortillas (6 to 8 inches across)
- 5 slices cooked turkey



Steps

1. Put the cheese, chopped tomato, and sour cream in the bowl. Stir with the spoon until mixed.
2. On top of each tortilla, put a slice of turkey.
3. Spread 2 tablespoons of the cheese mixture from the bowl over each slice of turkey.
4. Roll up the tortillas.
5. Poke a toothpick through the middle of each wrap to keep it rolled up.

Makes 5 delicious wraps.

- 26 Why did the author write "Tortilla Wraps"?
- A to explain how to bake food
 - B to teach facts about food groups
 - C to teach how to make a party treat
 - D to explain facts about ingredients
- 27 How are the instructions for making tortilla wraps organized?
- A by explaining where to find the equipment
 - B by giving each step in order
 - C by describing the different ingredients
 - D by listing types of party food
- 28 Where in the recipe would you find the amount of sour cream needed to make the wraps?
- A in the Title
 - B in the Steps
 - C under the Equipment heading
 - D under the Ingredients heading
- 29 How many tortilla wraps will be made by following the directions?
- A 2
 - B 5
 - C 6
 - D 8
- 30 Which step comes right after the cheese mixture is spread over the turkey?
- A Roll up the filled tortillas.
 - B Stir with a spoon until mixed.
 - C Put the turkey on the tortillas.
 - D Poke a toothpick through the wrap.

Directions: Read the story. Then do Numbers 31 through 35.

Buddy Takes a Canoe Ride

My brother Juan took me and our dog Buddy for a canoe trip. Buddy was in the front and wagged his tail every time he saw a fish. He even tried to catch one with his paw.

After a while, we started going faster. I could hear rushing water in the distance. "Are we going to be safe?" I asked.

Juan said, "Don't be scared, Little Brother. This will be fun."

"I'm not scared," I said.

Actually, I was a little scared, but I didn't want Juan to know. "Let's paddle faster," I said. I thought if we went faster, it would be over sooner.

Buddy barked. He ran back and leaned against my legs. He wasn't wagging his tail anymore.

The water rushed, but I held on tightly to my paddle. Juan and I paddled hard. Soon, we got past a big rock, and then the water was calm again.

"We did it!" I said.

"That wasn't so bad. Right, Little Brother?" Juan asked.

"It was great! Let's do it again!" I said.

"Sorry," said Juan. "We've got to get back home."

When we got out of the canoe, Buddy's tail was wagging faster than ever. I think he was glad to be back on dry land.



31 Why did the author write this story?

- A to explain water safety rules
- B to teach people how to paddle a canoe
- C to entertain with a story about a canoe ride
- D to solve the problem of how to get down a river

32 Where was Buddy riding in the canoe when they started?

- A in the front
- B next to Juan
- C in the back
- D between the brothers

33 Why did Buddy start wagging his tail when the canoe ride was over?

- A He saw another fish.
- B The canoe ride was fun.
- C The water was calm again.
- D He was happy to be on dry land.

34 Which line from the story tells why the main character didn't want to show his fear?

- A I could hear rushing water.
- B I didn't want Juan to know.
- C I held on tightly to my paddle.
- D I paddled hard.

35 Read the sentence from the story.

I could hear rushing water in the distance.

What does the word rushing mean?

- A quiet
- B fast
- C cold
- D deep

STOP 

Reading 19

WRITING *Use Conventions*

Practice A

Choose the word that correctly completes this sentence.

Please pick up your trash and place it _____ the trash can.

- A at
- B on
- C in

Practice B

Choose the sentence that has the correct punctuation.

- A He needs to buy milk, cereal, and, fruit at the grocery store.
- B He needs to buy milk, cereal, and fruit at the grocery store.
- C He needs to buy, milk, cereal, and fruit at the grocery store.

STOP 

Directions: For Numbers 1 through 5, choose the word or words that correctly complete the sentence.

- 1 Each day millions of _____ enjoy reading books.

- A childs
- B children
- C childrens

- 2 My brother _____ macaroni for dinner last night.

- A makes
- B maked
- C made

- 3 I like to swim, _____ I don't like to dive.

- A or
- B if
- C but

- 4 When we go to the movies, can you come with _____?

- A ours
- B us
- C we

- 5 The boys and girls in the band _____ their favorite song.

A playing
B is playing
C are playing

Directions: For Numbers 6 and 7, choose the sentence that has the correct capitalization.

- 6 A To visit his cousin, Mark has to cross the Mississippi River.
B To visit his cousin, mark has to cross the mississippi River.
C To visit his cousin, Mark has to cross the mississippi river.

- 7 A hockey is my favorite sport.
B our team is called the Rockets.
C We also like to play soccer.

Directions: For Numbers 8 through 12, choose the sentence that has the correct punctuation.

- 8 A When will the Gamboa family return from their trip!
B They have been gone for almost two months.
C I have been taking care of their pets?

- 9 A The school band uniforms are red, black, and gold.
B The school band uniforms are red, black and, gold.
C The school band uniforms are red black, and gold.

- 10 A My mom said were' having chicken for dinner.
B My mom said we're having chicken for dinner.
C My mom said we'are having chicken for dinner.

- 11 A Shen came to this country on January 12 2004.
B Ali moved to New York on August, 24, 2004.
C Victoria left for Brazil on June 10, 2004.

- 12 A Johns sister is the best math student in the sixth grade.
B John's sister is the best math student in the sixth grade.
C Johns' sister is the best math student in the sixth grade.

Directions: For Numbers 13 through 17, choose the sentence that is complete and written correctly.

- 13 A Grew a garden at our school.
B Vegetables that grow in our area.
C Our class made a salad.
- 14 A The student her friends met.
B The student met her friends.
C Her friends the student met.
- 15 A Morgan likes to sing, Michael likes to play the guitar.
B Morgan likes to sing Michael likes to play the guitar.
C Morgan likes to sing, and Michael likes to play the guitar.
- 16 A Our teacher wants us to read book.
B Our teacher wants us to read a book.
C Our teacher wants us to read an book.
- 17 A Kenji plays the flute.
B Practices an hour every day.
C The music club at school.

Directions: Do Numbers 18 through 20.

- 18 Choose the sentence that has beautiful in the right place.
A Amelia picked the most flowers beautiful.
B Amelia picked the flowers most beautiful.
C Amelia picked the most beautiful flowers.
- 19 Choose the sentence that has carefully in the right place.
A Adan carefully painted a picture of a sailboat.
B Adan painted a carefully picture of a sailboat.
C Carefully painted Adan a picture of a sailboat.
- 20 Choose the sentence that has chocolate in the right place.
A Rachel served cookies chocolate to her friends at school.
B Rachel served chocolate cookies to her friends at school.
C Rachel chocolate served cookies to her friends at school.

STOP 

Appendix F

Classroom Observation Focus Points

Environment

Posters, other objects around the room
International, multicultural items
Books, other forms of media
Conditions of materials
Holiday décor?
Student media center/library

Teaching Methods

Oral vs. written
Accommodation for Spanish
Class format (lecture, group work, etc.)
Classroom incentives/rewards
When are students asked to read/speak?

Student Language Choice

Student-teacher interactions
-How students answer questions
Student-student interactions
Comfort using English
-Quality of English
-Fluency of English

Code switching

Language use following hesitation
Frequency of code switching
Occasion in which code switching occurs

Student-student interactions

How is seating assigned?
Interactions among small groups
Student reactions to English deficiencies
Who outside of school they cite
(ex. "My mom says...")

Motivation

Level of participation

Appendix G

Data: Quantitative Assessment of Qualitative Student Survey Data

Student	1	2	3	6	7	8	1	2	3	Test	Rank
5	0	--	1	1	0	1	1	--	1	67	Below Average
8	1	0	1	0	0	1	1	1	1	85	Above Average
15	1	1	0	1	0	1	1	1	1	56	Below Average
19	1	1	1	1	0	1	1	1	1	80	Above Average
25	--	--	--	1	0	0	1	1	0	88	Above Average
26	0	--	--	0	0	1	1	1	0	68	Below Average
28	1	1	1	0	0	0	0	1	0	79	Above Average
29	1	1	1	0	0	1	1	--	--	87	Above Average
31	1	1	1	1	0	0	1	1	0	77	Equal to Average
32	1	1	1	1	0	1	1	1	0	68	Below Average
34	1	0	1	1	0	0	1	1	1	79	Above Average
47	1	0	--	1	0	0	1	0	--	85	Above Average
53	0	--	--	0	0	0	0	--	0	76	Below Average
yes_no	9_3	6_3	8_1	7_5	0_13	7_6	11_2	9_1	5_6	77	
yes=1											
no=0											

Figures

Data: Graph Output of Factors

Media Exposure

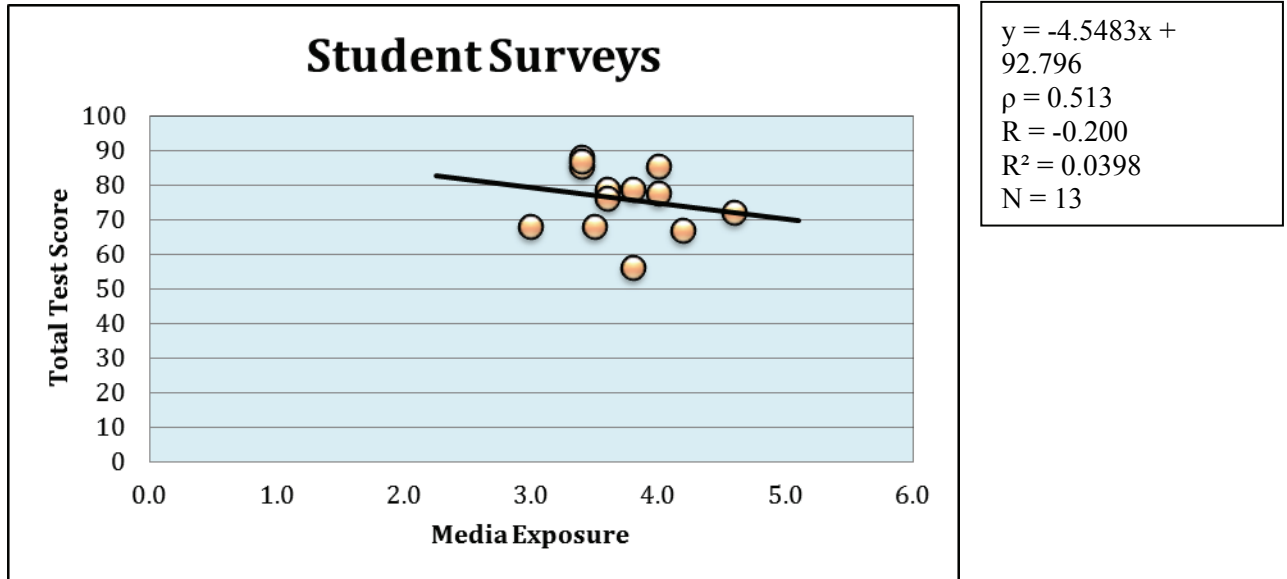


Figure 1

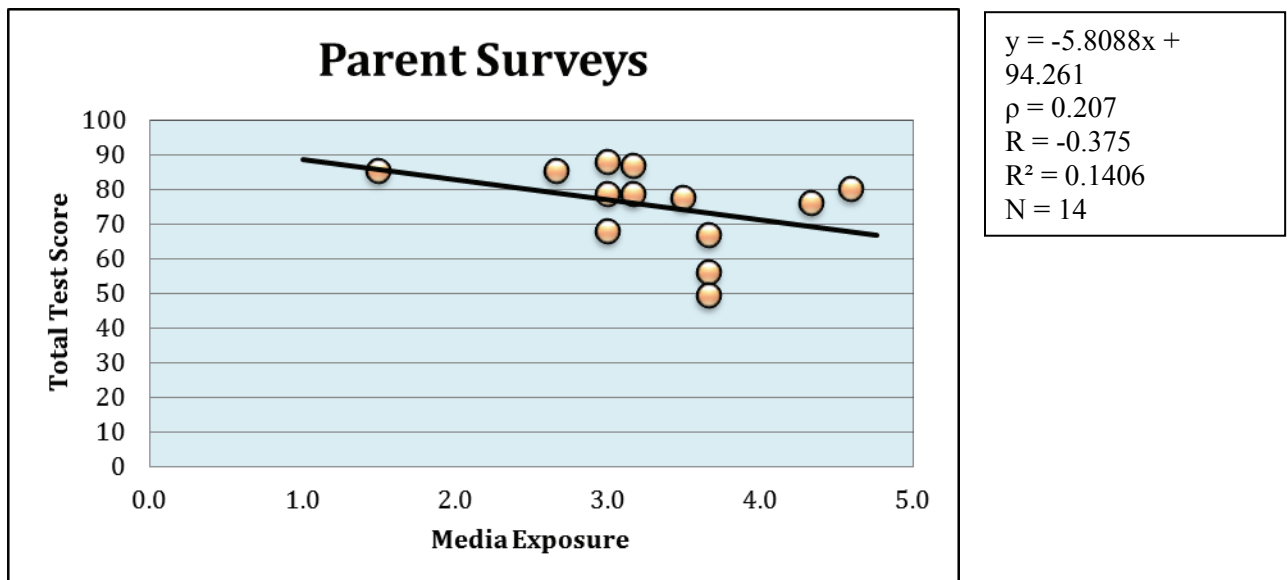


Figure 2

Total External Valorization

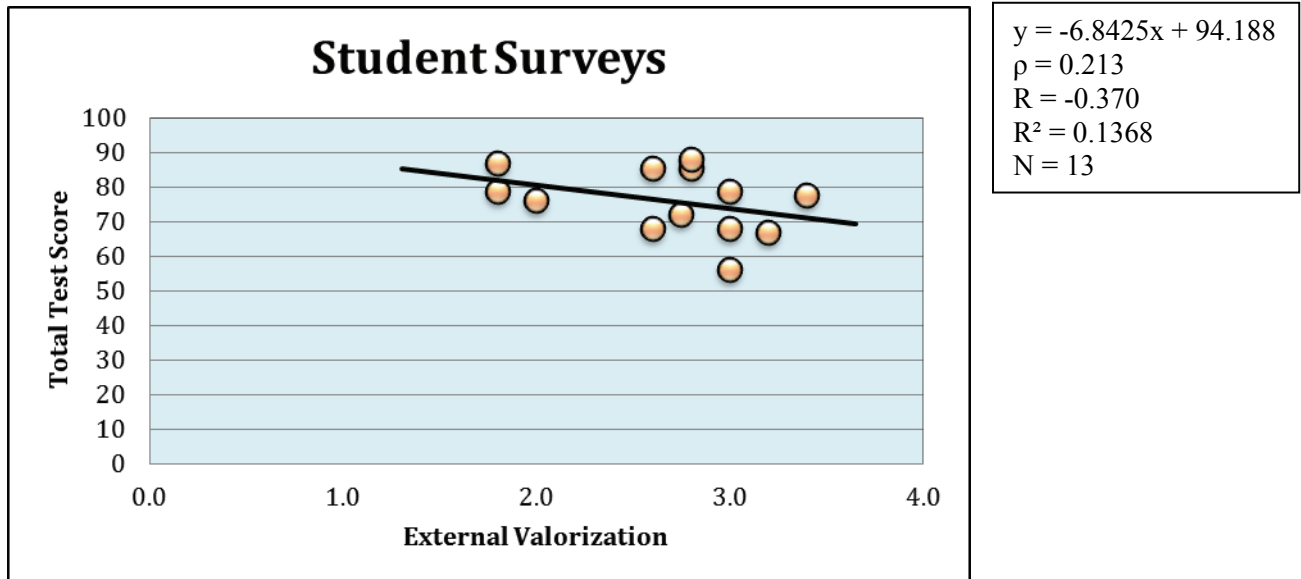


Figure 3

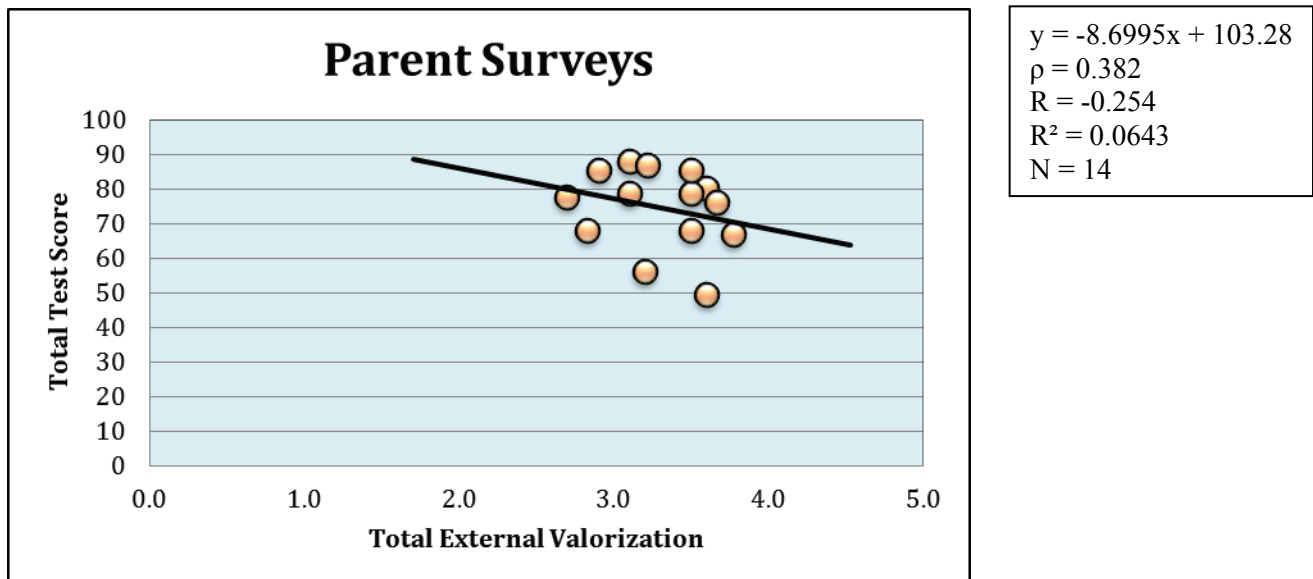
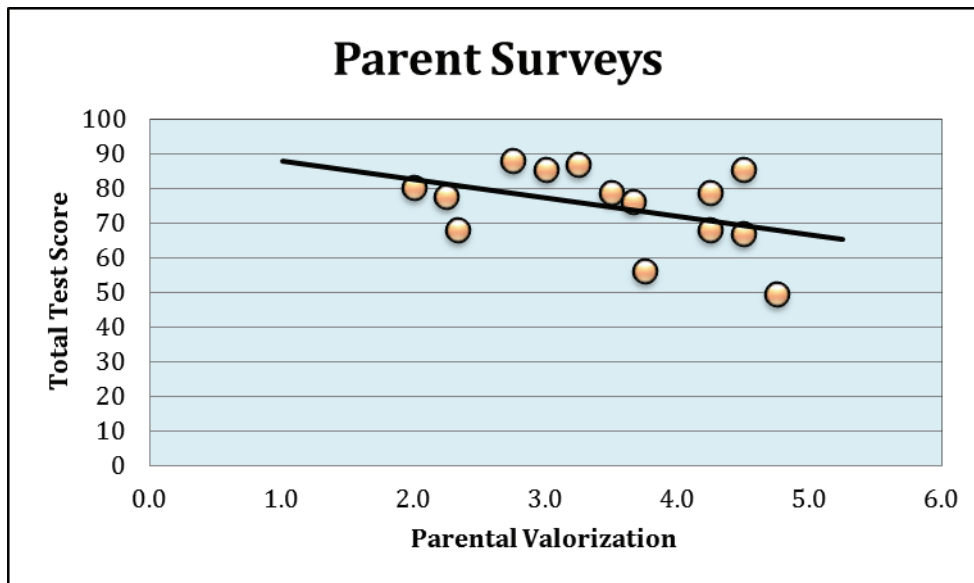


Figure 4

Parental and Community Valorization



$$y = -5.2998x + 93.026$$

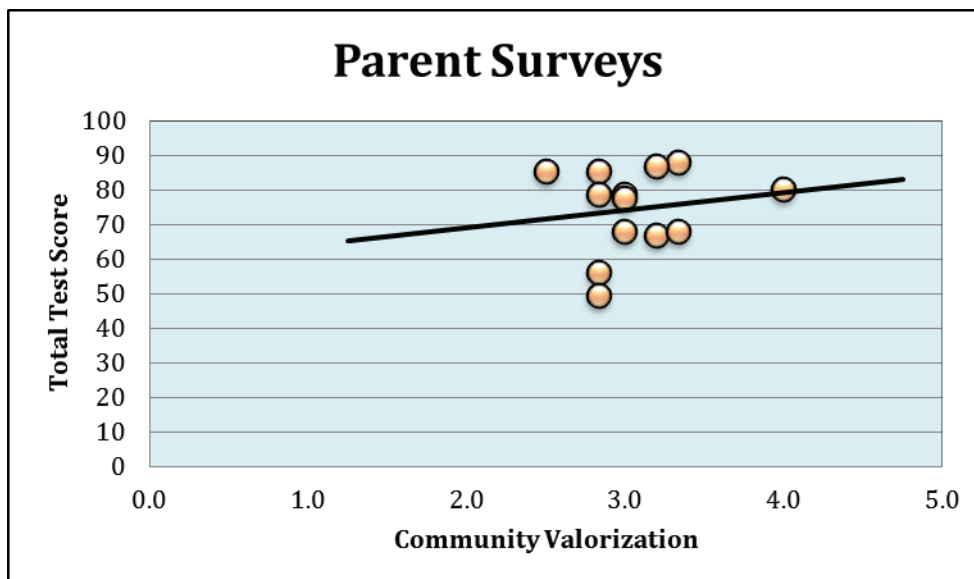
$$\rho = 0.140$$

$$R = -0.415$$

$$R^2 = 0.1725$$

$$N = 14$$

Figure 5



$$y = 5.0588x + 58.935$$

$$\rho = 0.619$$

$$R = 0.153$$

$$R^2 = 0.0233$$

$$N = 14$$

Figure 6

Internal Valorization

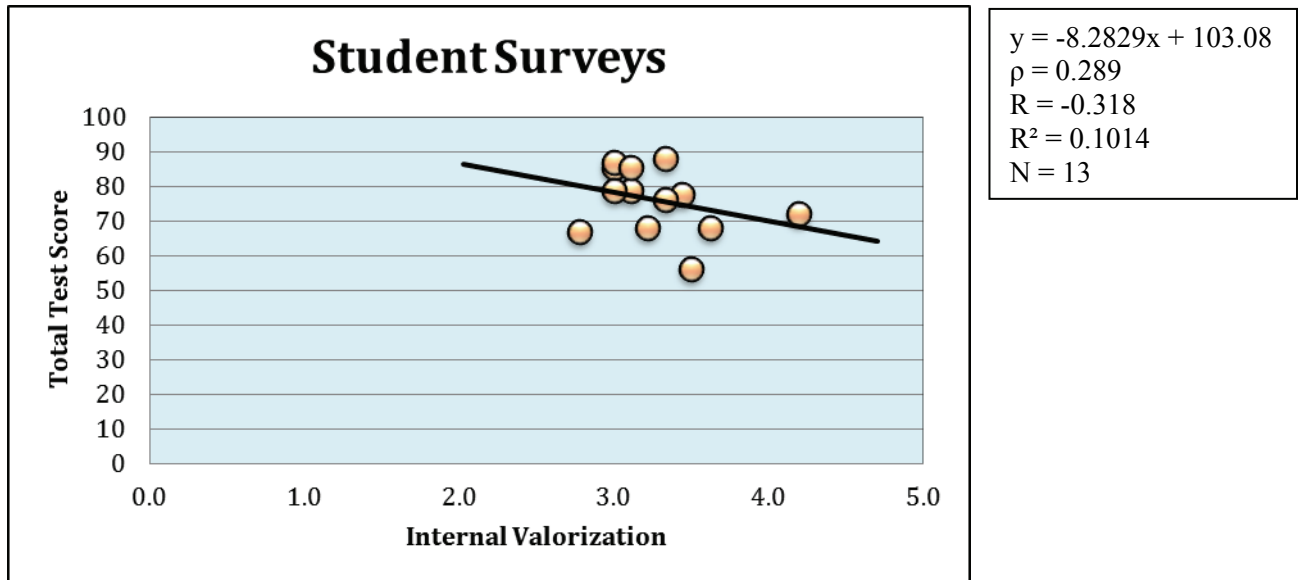
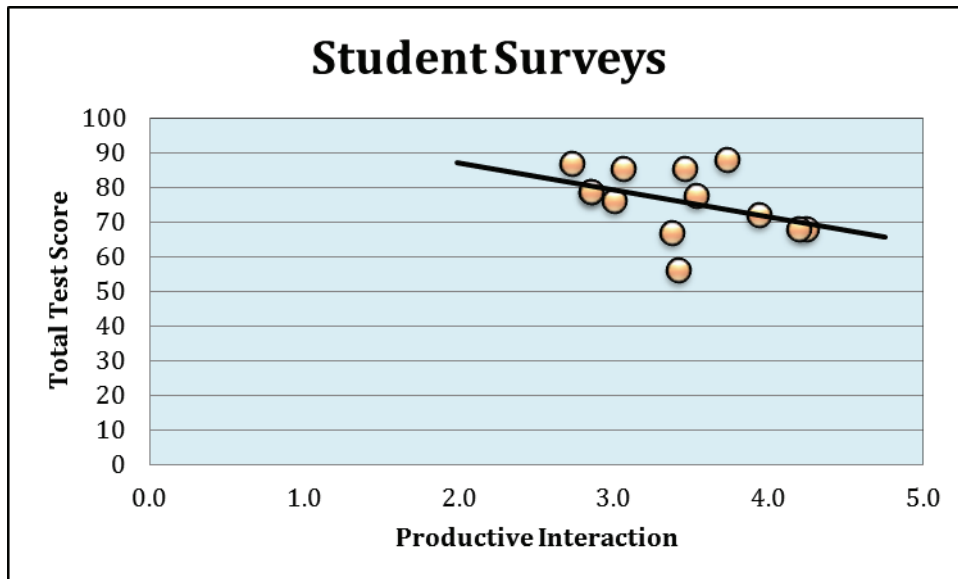


Figure 7

Productive Interaction



$$y = -7.7167x + 102.26$$

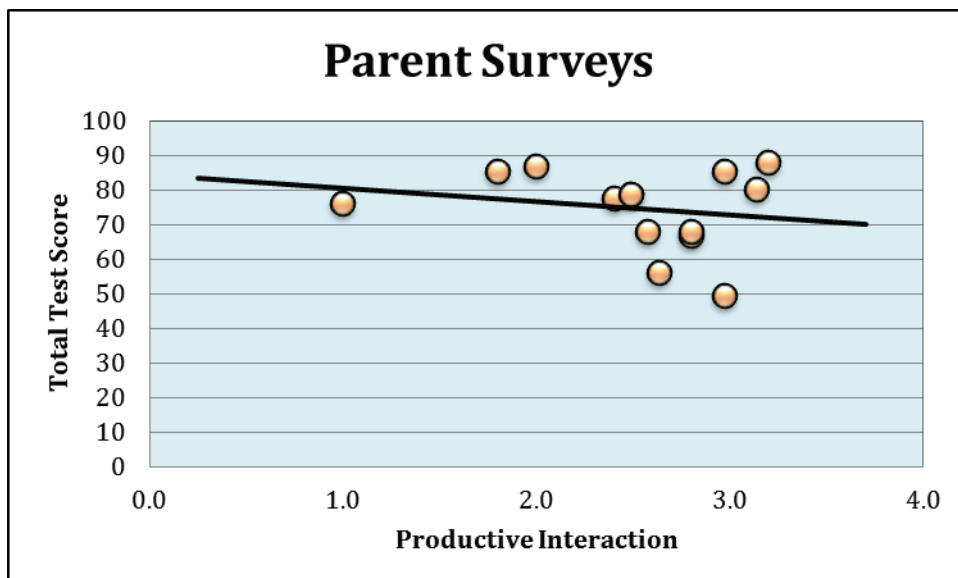
$$\rho = 0.161$$

$$R = -0.413$$

$$R^2 = 0.1705$$

$$N = 13$$

Figure 8



$$y = -3.8229x + 84.204$$

$$\rho = 0.506$$

$$R = -0.194$$

$$R^2 = 0.0377$$

$$N = 14$$

Figure 9

Receptive Interaction

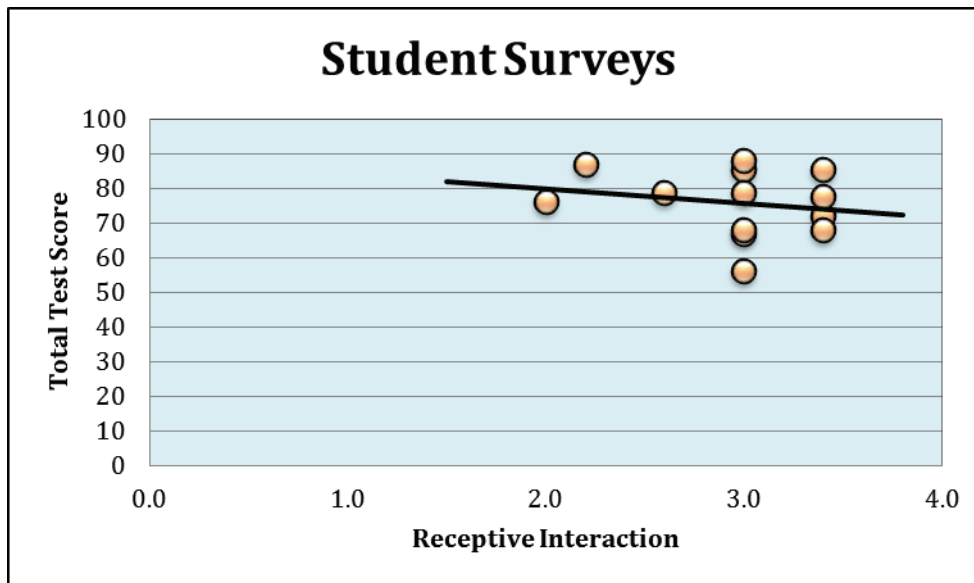


Figure 10

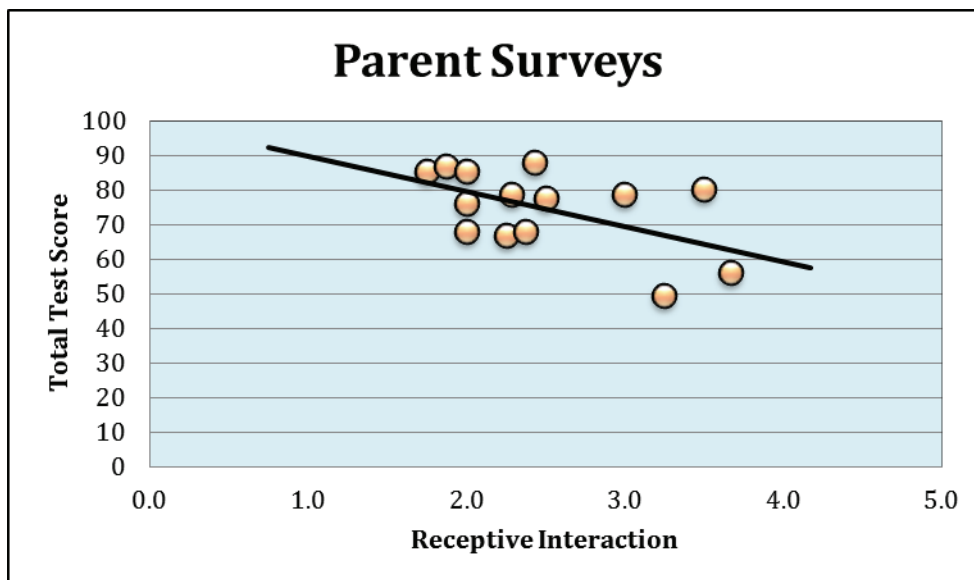


Figure 11