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1

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1

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Abstract

Hispanics, the nation's largest ethnic minority, are largely characterized by their low levels of education and Spanish-speaking backgrounds. In 1989, 96% of Hispanic school-aged children lived in homes where Spanish is spoken at home. Because many Hispanics speak Spanish at home, this study seeks to explore the association between foreign language use at home and academic achievement. Using data from the Texas Higher Education Opportunity Project, preliminary cross-tabulations find that home language use does not sufficiently explain academic achievement patterns across race/ethnic groups. However, a strong correlation is shown between parental academic background and academic success. Bivariate analyses find that Hispanics who have at least one parent with a college education will perform significantly better and narrow achievement gaps between Hispanics and Whites and Asians.

2

I. Introduction

Representing 13% of the total United States population, the Hispanic population is projected to grow by 1.5 million annually from immigration and natural increases (National Research Council 2006). Among the many institutions to be impacted by the expanding Hispanic population is the education system, which is largely responsible for educating incoming immigrants and their children. The role of the school system is increasingly crucial for large segments of Hispanic youth whose parents cannot speak English and do not understand the inner workings of the complex United States education system. Unlike other racial/ethnic groups that have experienced increases in educational attainment since the 1960s, Hispanics remain the population with the least amount of education because of disproportionate representation in dysfunctional schools, limited opportunities to acquire pre-literacy skills, poor relationships with teachers, and lack of guidance in secondary schools (National Research Council 2006). Further, schools, especially those that have minority-dominated student bodies, are contributing to the accumulation of disadvantages that Hispanics face in education because they cannot compensate for the parents' immigrant status, low education levels, lack of proficiency in English, and low socioeconomic status. Hispanic students and their parents hold high educational expectations because it is understood that higher levels of education aid tremendously in future financial success. That these expectations are not often met results in Hispanics having the highest high school dropout rate of any racial or ethnic group: 22% in 2005 (U.S. Department of Education 2007).

Discussions of native language proficiency versus English-language proficiency are highly relevant for Hispanics because of their immigrant background. They are the most likely of the major racial/ethnic groups to be both immigrants and non-English speakers. Furthermore,

3

with respect to schools, Hispanic students are most likely to come from homes where a language other than English is spoken. Specifically, 96% of Hispanic school children ages 8-15 in 1989 reported that they primarily spoke a foreign language at home (McArthur 1993; Rumberger and Larson 1998).

I focus my study of Hispanic achievement on how home language use influences class rank and test scores, using evidence from Texas high schools. After introducing conventions and varying conclusions that previous literature addresses with regards to how language influences academic achievement, I propose some research hypotheses and describe Texas and its usefulness as an interesting case study. Lastly, the final sections are dedicated to addressing evidence and conclusions based on bivariate analyses.

II. Previous Literature

Researchers have provided important research questions about English language and foreign language proficiencies.

- Is foreign-language proficiency an impediment to academic achievement, or does it have a positive effect on performance in the classroom?

- What are the relationships between factors of family background, English-language proficiency and migration history?

- How do factors that influence academic achievement vary between and among ethnic groups?

These research questions have led to various hypotheses about how language influences scholastic performance of Hispanics. Although the literature argues for many causes of low Hispanic academic achievement, earlier studies emphasized foreign language use as an important

4

factor for explaining lower test scores and grades. However, more recent studies have begun to consider socioeconomic status (SES), family background, and migratory history as other possible explanations for academic performance. The following sections summarize the debate on language and academic achievement that will provide context for how home language use will influence grades and test scores.

The Language Proficiency and Academic Achievement Debate

In a literature review that discusses educational achievement of language-minority students, Schmid (2001) claims that language-minority students confront many obstacles that prevent them from performing well in school. Language-minority students will most likely attend schools that are predominately poor and segregated with inexperienced teachers, while being overrepresented in special education classes (Crawford 1997; Ortiz 1992; Moss and Puma 1995).

Benefits of Native Language Fluency

In their respective studies, Bankston and Zhou (1995) and Lindholm and Aclan (1991) approach the question of how language proficiency influences academic achievement by emphasizing and identifying that proficiency in the native language assists the learning and educational performance of students in schools.

Bankston and Zhou (1995) argue that bilingualism and proficiency in a native language contribute positively to academic achievement and college plans of Vietnamese youths in New Orleans. They identify three theoretical perspectives to describe the language assimilation process for language-minority students: forced assimilation, reluctant bilingualism, and linguistic pluralism. They argue that linguistic pluralism is more conducive to learning by Vietnamese

5

youths. By using this approach, students are able to use their fluency in Vietnamese to facilitate and enhance their academic learning and increase their English proficiency through improved cognitive abilities. Forced assimilation, by comparison, forces students to either "sink or swim." Similarly, reluctant bilingualism serves as a strategy to achieve the "ultimate goal of linguistic assimilation" (Bankston and Zhou 1995). They conclude, nonetheless, that native language proficiency does not inevitably lead to impediments to social adaptation and upward mobility. In fact, Bankston and Zhou argue that foreign-language skills contribute to academic achievement. Specifically, the relationship between grades and foreign-language literacy appears to be linear and significant.

Lindholm and Aclan (1991) find that elementary school Spanish-speaking students perform extremely well in their English-language mathematics tests, which is an important finding because these students had not begun instruction using English. Lindholm and Aclan further conclude, with respect to the students' excellent performance in tests, that their scores demonstrated that they were able to translate what they learned when taught in Spanish into English. Despite these findings, Lindholm and Aclan also argue that a mastery of English and Spanish is more beneficial as time goes on because highly proficient bilinguals will perform better academically than medium- or low-level bilingual proficient students.

Language as a Neutral Effect on Academic Achievement

Contrary to the above findings that multiple language proficiency can help students, Fuligni (1997), Kennedy and Park (1994), and Yeung et al. (2000) introduce socioeconomic status and family background as decisive factors explaining educational performance and find that language either has a small or nonexistent effect on grades and test scores. Fuligni (1997)

6

examines the relative impact of family background, parental attitudes, peer support, and the students' own attitudes and behaviors on the academic achievement of students from immigrant families. Kennedy and Park (1994) conduct a comparative study of the relationship between home language use and academic achievement among Mexican-American and Asian-American eighth grade students. Yeung et al. (2000) examine the relationship of home language proficiency to factors such as achievement in English and other curriculum areas.

Fuligni (1997) uses a sample of 1,341 students from four schools (two high schools and two middle schools) in a California school district. He finds that foreign-born students receive significantly higher grades than native adolescents, despite having parents that presumably do not have high levels of education and are not fluent English speakers. However, Fulgini finds that socioeconomic status and occupational status explains these outcomes.

Kennedy and Park (1994) establish that over the last two decades, studies have strongly agreed that home language use contributes to academic difficulties for some racial/ethnic groups. They also report that other research declares the language barrier an inadequate explanation for low academic achievement. Instead, studies have shown that language-minority students begin with disadvantages that can be attributed to their socioeconomic background and self-esteem. Results from these studies indicate that home language use is unrelated to grades for Asian-American students. For Mexican-American students, speaking English at home is positively related to higher test scores, and home language use is consistently irrelevant for course grades and test scores. This suggests that much of the influence of language may be mediated by socioeconomic status.

As other studies have shown, the debate on home language use and academic achievement has been divided. However, Yeung et al. argue that past studies by Dolson (1984)

7

and Yee and LaForge (1974) have shown that if students are proficient in their native language, then those students are more likely to perform better in school. These studies provide evidence that counters the suggestion that proficiency in a language other than English would lead to lowered performance in English or in other academic areas. Yeung et al. find that the paths from home language fluency to academic achievement in the tenth grade were small and statistically insignificant. In general, similar insignificant findings exist for twelfth grade academic achievement as well. In the twelfth grade, however, it is shown that first language proficiency has a small, positive effect on math and history standardized tests. Yeung et al. demonstrate that home language use has a significant negative effect on science tests. However, it is further shown that this negative effect in the tenth grade diminishes as students advance to the twelfth grade. Therefore, any negative effects from home language disappear as years of schooling increases.

Warren (1996) hypothesizes that family background, language, and migration interact with each other to provide a more substantive explanation for poor academic achievement among Mexican-origin students. Although other studies demonstrate that language and academic achievement are significantly related, Warren finds that English-language ability and migration history, while important factors, are not the most important causes for low academic achievement. When English-language ability is held constant, Hispanics are still at a substantial academic disadvantage. Warren further argues that family background factors account more sufficiently for ethnic group differences in academic achievement. Furthermore, after taking family background, migration history, and language into account, Mexican-origin students still are at a great disadvantage.

Native Language Fluency as a Barrier to Academic Achievement

Other studies have argued that native language fluency and lack of English proficiency is an impediment to students who speak a language other than English at home. Rumberger and Larson (1998), Warren (1996), Post (1990), and Steinberg et al. (1984) assert that English-proficient students are at a marked advantage compared with foreign-language-proficient students, who tend to perform more poorly academically and are less likely to graduate from high school. Specifically, Rumberger and Larson (1998) examine differences in educational achievement among Mexican-American students. Warren (1996) discusses how family background, language, and migration influence academic achievement of Mexican-origin adolescents from data from the 1990 Public Use Microdata Samples. Post (1990) investigates college-going decisions by Chicanos, asking how language and ethnicity influence college-going decisions. Addressing another important consideration when discussing whether language is a barrier for academic achievement, Steinberg et al. (1984) ask what explains the high dropout rates of language-minority youth.

As a way of describing academic achievement, Rumberger and Larson (1998) use grade-point average and transience as their outcome variable measures. The explanatory variables used include educational engagement (absences), educational commitment (first day of school attendance), and SES and cultural variables (language proficiency, gender, country of origin, poverty, overages). Their study suggests that fluent English-proficient students had higher grades and lower transience and were more likely to be on track with their high school credits than English-only or limited-English-proficient students. Among seventh grade students, limited-English-proficient students achieved lower academic grades and were more likely to drop out of school. Among exiting ninth-grade students, there were no statistically significant differences in grades among the three language groups. These findings could also suggest that

9

two mechanisms are present. First, students may be performing better. Second, the statistical significance of these findings disappears because lower-performing students are failing and dropping out of school.

Spanish-language Hispanics and Dropping Out

Post (1990) finds that for children of Spanish-speaking parents, costs of college are a main deterrent to enrolling in college. More than any other racial/ethnic group, Hispanics are most likely to consider costs of college as a main factor in deciding to go to college. Because Hispanics are more likely to have parents who lack fluency in English, Hispanic parents and students are not knowledgeable about financial aid opportunities. Children of Spanish speakers had the most unrealistic ideas of the cost of college. Therefore, Post shows that Hispanics are at a substantial disadvantage in their efforts to enter higher education.

Steinberg et al. (1984) find that when socioeconomic status is held constant, Hispanics still drop out of high school at a high rate. As a result, socioeconomic status is not a sufficient explanation for low academic achievement. Steinberg et al. also find that language minority youth drop out at a higher rate than English-language Hispanics. In sum, the lack of English proficiency and low socioeconomic status determines a higher dropout rate for Hispanics in high school.

III. Research Hypotheses

Previous studies about language and Hispanic academic achievement have generally arrived at three different conclusions. First, studies have argued that foreign-language proficiency is beneficial and responsible for high levels of academic achievement. Other studies have focused on other SES and cultural factors as being integral in explaining academic achievement. Lastly,

10

other studies argue that a lack of English proficiency is detrimental to a student's educational outcomes. Based on previous studies, I hypothesize that

- Academic achievement of English-language groups will be higher than that of non-English language groups

  o White students will perform better academically than Spanish-language Hispanics
  o White students will also perform better than Asians because Asians predominately speak a non-English language at home
  o English-language Hispanics will have higher levels of academic achievement than Spanish-language Hispanics
  o Whites will have higher levels of educational achievement than English-language Hispanics

If English-language Hispanics and Whites had equal educational outcomes and Asians and Spanish-language Hispanics had lower ones, the hypotheses about the influence of language would not be rejected. However, if Hispanics primarily speak English at home and they do not perform comparably to Whites and if Asians perform better than Whites, for example, then the result may indicate that parental education accounts for variance in academic achievement more so than language. Despite language being an important factor to consider, it is interesting to consider associations between parental education and academic achievement by race/ethnicity. Hispanics and Asians are most likely to represent the lowest- and highest-achieving students, respectively (Kao and Tienda 1998). But, if they have similar non-English language backgrounds, does parental education differentiate between proposed high and low levels of academic achievement of Asians and Hispanics, respectively?

IV. Texas as a Case Study

Texas serves as an interesting case study of language and academic achievement because of intense diversification, its growing college-eligible population, and its poor scores on various educational indicators compared with other states of comparable wealth. Further, its state

11

legislature passed the top 10% law, replacing traditional affirmative action policies (Tienda 2006, pp. 3-4).

On top of having the fifth largest immigrant population in the United States, the history of education in Texas is defined by several momentous legal cases and legislation. As recently as 1980, the federal Office of Civil Rights conducted an investigation of the Texas school system and found that the state had "failed to eliminate vestiges of its former *de jure* racially dual system of public higher education, a system which segregated blacks and whites" (Leicht and Sullivan 2000). The OCR investigation also found that Blacks and Hispanics were grossly underrepresented in higher education. After several rejected proposals, OCR and Texas agreed to the "Texas Plan," which states that "admissions officers will consider each candidate's entire record and will admit black and Hispanic students who demonstrate potential for success but who do not necessarily meet all the traditional admissions requirements." Another important case, *Plyler v Doe* in 1982, saw MALDEF argue for the children of immigrants to be protected under the Fourteenth Amendment and thus entitled to a public education. In 1996, *four White law school applicants who asserted that they were rejected unjustly from the University of Texas School of Law because of affirmative action filed Hopwood v the University of Texas Law School*. Although the judge ruled against the plaintiffs, the U.S. Court of Appeals reversed the decision. In response to the 1996 Hopwood decision, the Texas legislature passed the top 10% law, which automatically admits the top 10% ranked students from every high school into public Texas universities (Leicht and Sullivan 2000). Some argue that the top 10% law does not eliminate education disparities, but does make the competition for admission into higher education more leveled since it measures academic success relative to available resources (Chapa 2005).

12

V. Data and Methods[1]

The data for this study come from the Texas Higher Educational Opportunity Project survey data (THEOP). THEOP is a multi-year study investigating college planning and enrollment behavior under the top 10% rule of Texas, which guarantees admission to the top 10% of each high school into any Texas public university. THEOP consists of a representative sample of seniors and sophomores attending Texas public high schools during Spring 2002. With a stratified sample of 98 schools, 13,803 seniors and 19,969 sophomores were interviewed in the baseline survey. Respondents completed a survey that asked about educational experiences, extra-curricular activities, courses, class rank, future plans, and demographic information. One year later a random sample of the senior cohort (N=5,800) were re-interviewed to learn about actual college enrollment, which is the cohort used in this study.

Dependent Variables

In order to understand how home language use influences academic achievement, I use self-reported class rank and SAT test scores as indicators of academic achievement. Class rank is used to determine who qualifies for automatic admission. Test scores are commonly used to measure merit. Although grade point averages are the most commonly used indicator of academic achievement, this information is represented here by class rank using a common metric.

Independent Variables

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[1] All missing responses are excluded from all analyses.

Independent variables include demographic information such as race/ethnicity and country of origin. The education level of the respondents' parents and the home ownership status serve as a proxy for socioeconomic status. Lastly, home language, the independent variable of interest, is measured by students who responded that they spoke a language other than English in their homes. Those who responded "yes" spoke a non-English language at home. Respondents who answered "no" only spoke English at home.

In order to measure differences across Hispanic language groups, I recoded the race/ethnicity variable to differentiate between Hispanics who speak English at home (English-language Hispanics) and those who speak a language other than English at home (Spanish-language Hispanics). Furthermore, the sample of Asians heavily responded that they speak a language other than English primarily at home. Similarly homogenous with respect to language, Whites will only be considered as only speaking English at home, since 92% of Whites responded that they spoke English at home. Therefore, I have special interest in four groups: Whites, Asians, English-language Hispanics, and Spanish-language Hispanics.

Parental Education

As separate questions, respondents were asked for the highest level of education completed by their mother and father. To provide a measure that encompassed the education levels of each parent, I created a composite variable to consider parental education. In each case, the parent with the highest level of education captures parental education. For example, if the highest level of education that the respondent's mother completed was high school and the father completed college, the respondent's parental education value would be "two or four year college graduate."

14

VI. Descriptive Findings

Home Language Use

Senior respondents from the wave one THEOP survey were asked if they spoke a language other than English at home. According to Table 1, 92% of Whites and 83% of African-Americans said that they only speak English at home. At the other extreme, 91% of Asians reported that they speak a language other than English at home. Similarly, 88% of Hispanics reported speaking a language other than English at home. The difference in home language use between those who predominately speak English at home and those who do not is characteristic of recent immigration being dominated by Hispanics and Asians (Kennedy and Park 1994). Thus, Hispanics and Asians are significantly more likely than Whites to speak a language other than English at home. A chi-square test demonstrates that the association between race/ethnicity and home language use is significant (χNEEDS CHI $2 = 3000$, p=0.00).

TABLE 1
Home Language Use by Race/Ethnicity

Note: Top number indicates *N*, and bottom number indicates percentage; NEEDS CHI2 = 3000; *p<.000*

Race/Ethnicity	Foreign-language Use at Home		Total
	Yes	**No**	
White	163 (8.09)	1,852 (91.91)	2,016 (100)
African-American	160 (16.9)	787 (83.10)	947 (100)
Hispanic	1,477 (87.86)	204 (12.14)	1,681 (100)
Asian	334 (91.01)	33 (8.99)	367 (100)
Total	2,134 (42.59)	2,877 (57.41)	5,011 (100)

Table 2 tabulates parental education by race/ethnic and language groups. Only 11% of English-language Hispanics responded that both of their parents have less than a high school education, while Spanish-language Hispanics are more than three times as likely to have both parents with less than a high school education. Of Spanish-language Hispanics, 36% responded that both their parents had less than a high school education. Other intra-ethnic comparisons reveal that Spanish-language Hispanics have been able to narrow the gap in parental education, but English-language Hispanics still have a decided and significant advantage with respect to parental education. Over one-third of English-language Hispanics replied that they had at least one parent with a post-secondary degree compared to only 26% of Spanish-language Hispanics. Despite comparability to Hispanics in language and nativity characteristics, Asians are nearly identical to Whites with respect to parental education outcomes. Two-thirds of Whites and Asians responded that one or both parents had received at least a college degree. English-language Hispanics are more likely than Spanish-language Hispanics to have at least one parent with a post-secondary education. However, in comparison to Whites and Asians, English-

16

language Hispanics remain disadvantaged, since they are 10 and 11 percentage points *less* likely

to have a parent with a post-secondary education. ($\chi 2 = 1100$, *p*=0.00)

TABLE 2
Parental Education by Race/Ethnicity

Race/Ethnicity	Parental Education				Total
	Less than HS	**High School**	**Some College**	**College**	
White	46 (2.46)	278 (14.86)	319 (17.05)	1,228 (65.63)	1,871 (100)
African-American	40 (4.67)	205 (23.95)	190 (22.20)	421 (41.18)	856 (100)
Hispanic (S)	471 (36.31)	300 (23.13)	190 (14.65)	336 (25.91)	1,297 (100)
Hispanic (E)	20 (11.24)	50 (28.09)	45 (25.28)	63 (35.39)	178 (100)
Asian	33 (10.09)	52 (15.90)	31 (9.48)	211 (64.53)	327 (100)
Total	610 (13.47)	885 (19.54)	775 (17.11)	2,259 (49.88)	4,529 (100)

Note: Top number indicates *N*, and bottom number indicates percentage; *p<.000*

VII. Home Language Use and Academic Achievement Findings

Academic Achievement

 To measure academic achievement, Table 3 presents a cross-tabulation of self-reported

class rank across racial/ethnic and language groups. Although the averages and class rank data

are upwardly skewed because of excluded missing data, 57% of Asians were in the top quintile

rank, despite their foreign-language use at home. They perform significantly better than the 41%

of Whites who claimed that they are in the top two deciles of their graduating class. Living in an

English-dominant household does not seem to close the gap sufficiently for English-language

Hispanics to be comparable to Whites and Asians, since only 36% of English-language

Hispanics graduated in the top two deciles of class rankings.   Spanish-language Hispanics were

more likely than African-Americans to report being in the top two deciles of their class;

17

however, Spanish-language Hispanics are less likely than English-language Hispanics to perform well enough academically to graduate in the top 20% of all graduating seniors. Chi-square analyses show that a statistical significant association between class rank and ethnic-language groups (NEEDS CHI2=250.7, *p*=0.00).

TABLE 3
Race/Ethnicity by Self-reported Class Rank

Race/Ethnicity	Self-reported Class Rank					Total
	0-20%	21-40%	41-60%	61-80%	81-100%	
White	826 (40.93)	525 (26.02)	422 (20.91)	179 (8.87)	66 (3.27)	2,018 (100)
African-American	239 (25.18)	224 (23.60)	284 (29.93)	150 (15.91)	52 (5.48)	949 (100)
Hispanic (S)	407 (28.52)	342 (23.97)	345 (24.18)	256 (17.94)	77 (5.40)	1,427 (100)
Hispanic (E)	70 (35.53)	47 (23.86)	44 (22.34)	25 (12.69)	11 (5.58)	197 (100)
Asian	212 (56.99)	84 (22.58)	43 (11.56)	23 (6.18)	10 (2.69)	216 (4.35)
Total	1,754 (35.34)	1,222 (24.62)	1,138 (22.93)	633 (12.75)	216 (4.35)	4,963 (100)

Note: Top number indicates *N*, and bottom number indicates percentage; χ^2=250.7; *p<.000*

Another measure of merit, SAT scores, is presented in Table 4 in a tabulation with race/ethnic and language groups. The average SAT score for Whites is 1054 (SD=179.8), which is second highest only to Asians, who have an average score of 1101 (SD=214.7). African-Americans have the lowest mean SAT scores at 858 (SD=164.2). Another important distinction is the mean difference between the average 867 point scores (SD=170.9) of Spanish-language Hispanics and 976 point scores (SD=180.7) of English-language Hispanics. English-language Hispanics tend to perform better in the SATs than their Spanish-language counterparts. In addition, consistent with class rank trends, Asians perform better academically than Whites despite being of foreign-language background.

18

Speaking English at home is associated with higher test scores for Hispanics, as English-language Hispanics perform better than their Spanish-language peers by 108 points. In order to test for significance, a two-tail t-test was conducted first to measure if test score mean differences were significant across all racial/ethnic groups who spoke English at home and those who did not. T-tests reveal a significant difference between mean test scores ($t = -11.3$, $p<.01$). In other words, respondents who speak another language at home have a statistically significantly lower SAT mean score than those who speak English primarily at home. In order to test mean test score significance across race/ethnic and language groups, an F-test was conducted. These results indicate that even after adjusting for race, mean test score differences still persist by home language use, $F=71.39$, $p=0.0$.

TABLE 4
Race/Ethnicity by SAT Mean Scores

Race/Ethnicity	SAT (mean scores)		Frequency
	Mean	**Std. Dev.**	
White	1054	179.8	1231
African-American	858	164.3	458
Hispanic (S)	868	170.9	629
Hispanic (E)	976	180.7	101
Asian	1102	214.7	184
Total	975	202.2	2603

Note: $F=71.39$; $p<.000$

Of interest in Table 3 and 4 is whether foreign-language use indicates lower academic achievement. If so, Whites and English-language Hispanics would perform the best since they predominately speak English at home. Spanish-language Hispanics and Asians should exhibit the lowest levels of academic achievement because they speak a foreign language at home. This generally holds only if Asians are not considered, but their academic outcomes undermine the hypothesis that non-English use at home lowers class rank and test scores, as shown in Table 5.

19

When incorporated into the analysis, Asians perform an average of 48 points above Whites in the

SATs and are more likely than Whites to be in the top quintile of their graduating class, despite

speaking a non-English language at home.

TABLE 5
Race/ethnicity by Academic Achievement

Race/Ethnicity	SAT Scores (mean)	Class Rank (top quintile)
Whites	1054	41%
Hispanic (E)	976	36%
Hispanic (S)	869	29%
Asians	1102	57%

VIII. Academic Achievement by Home Language Use and Parental Education

Since language does not sufficiently explain the patterns of academic achievement across

racial/ethnic groups, parental education is considered to explain the difference. In Table 6,

parental education is measured as the percentage of students who responded that they had at least

one parent with a college degree or more. Two-thirds of Whites and Asians responded that they

had at least one parent with a college education, which leads to a strong correlation between their

parents' high levels of education and their academic achievement. At the other extreme,

Hispanics who speak English at home and those who speak Spanish at home are substantially

less likely to have one parent with at least a college degree, and their achievement outcomes are

lower.

20

TABLE 6
Race/Ethnicity, Academic Achievement, and Parental Education

Race/Ethnicity	SAT (mean)	Class Rank (top quintile)	Parental Education (% college)
White	1054	41%	67%
Hispanic (E)	976	36%	35%
Hispanic (S)	869	29%	26%
Asian	1102	57%	65%

Table 6 suggests that parental education is a powerful explanation for academic achievement differentials. In order to look further into this possibility, Table 7 illustrates academic achievement by race/ethnicity and parental education. By controlling for parental education, we can more easily understand differences in Hispanic educational achievement. For Hispanics who speak English at home and whose parents have less than a college education, their mean SAT score is 948 but increases to 1033 if at least one parent has a college degree. Similarly, Hispanics who speak Spanish at home whose parents have less than a college degree have an average SAT score of 855, which rises if one parent has a college degree.

Thus, parental education appears to substantially narrow the achievement gap between Hispanics and both Whites and Asians. Specifically, English-language Hispanics' average SAT score of 1033 is only 50 points lower than the average SAT score for Whites at 1083. Prior to considering parental education, the gap between English-language Hispanics and Whites was 78 points. Although Spanish-language Hispanics still score significantly below the other three groups, their SAT scores and parental education were higher. Therefore, a significantly stronger connection exists between academic achievement and parental education than with home language use.

21

TABLE 7
Race/Ethnicity by Academic Achievement and Parental Education

Race/Ethnicity	SAT Mean Scores (Std. Dev.)		Class Rank: Top Quintile	
	Less than College	College or Greater	Less than College	College or Greater
White	1000 (171.9)	1083 (177.4)	33%	47%
Hispanic (E)	948 (185.6)	1033 (156.4)	32%	51%
Hispanic (S)	855 (159.1)	921 (189.3)	28%	36%
Asian	1054 (197.4)	1129 (222.5)	58%	57%

Note: $p<.000$

Results based on class rank measures of achievement are similar and also in Table 7. For Whites, English-language Hispanics, and Spanish-language Hispanics, the difference in the shares ranked in the top quintile of their graduating class is higher for those students whose parent has at least a college degree. While Whites experience an upward change of 14% from 33% to 47%, English-language Hispanics have a larger change from 32% to 51% when they have one parent with a college education. The 51% of English-language Hispanics that represent the top quintile is higher than the percentage of Whites who were in the top quintile of their graduating class. For Spanish-language Hispanics, their change is much smaller but still demonstrates the link between parental education and class rank. Spanish-language Hispanics have higher presence in the top quintile of their class by 8%. Therefore, with respect to class rank, Table 6 reveals that Asians and English-language Hispanics represent the groups that have higher representation in the top quintile in their graduating class, followed by Whites and Spanish-language Hispanics.

22

IX. Conclusion

Recent literature that investigates whether non-English home language use lowers academic achievement reaches three very different general conclusions. Some researchers find that foreign-language proficiency positively influences academic achievement (Bankston and Zhou 1995; Buriel and Cardoza 1988). Others find that language does not strongly influence academic achievement, finding only small effects, if any, of language use on academic achievement. These researchers find that other factors like parental education, socioeconomic status, and family background explain academic outcomes significantly more (Fulgini 1997; Kennedy and Park 1994; Yeung et al. 2000). A third group of researchers claim that a lack of English proficiency lowers academic achievement (Rumberger and Larson 1998; Warren 1996; Buriel and Cardoza 1988). Understanding how much of an influence language has on academic achievement is increasingly important since a growing number of Hispanics are second generation whose parents use Spanish at home (McArthur 1993; Rumberger and Larson 1998; Tienda and Mitchell 2006). Without a comprehension of why Hispanics have low levels of academic achievement, Hispanics' representation in higher education will be limited despite their having aspirations that reflect their desire to attend college (Kao and Tienda 1995). From a political standpoint, politics and nativist fears, not educational research, shape how language minorities are taught (Olsen 1997). Because the public more and more demands that immigrants be taught only in English, language minorities do not receive an adequate education despite research concluding that being taught in their native language results in language minorities receiving higher grades and test scores (Schmid 2001).

23

Based on bivariate analyses of academic achievement, I find that language does not provide sufficient explanation for low academic achievement within the Hispanic population. When Asians, a homogenous and non-English-speaking group, are not considered, non-English language use at home is associated with lower academic achievement. However, language is not a sufficient explanation because when Asians are considered they perform the best despite only speaking a non-English language at home. Because Asians and Whites are most likely to have at least one parent with a college degree, their average academic achievement is higher. Among students whose parents have at least a college degree, achievement gaps are narrower. Also, Hispanics who speak English at home and have a parent with a college degree are more likely than Whites to rank in the top quintile of their graduating class. These bivariate results do not support the hypothesis that non-English-language use lowers academic achievement. Instead, parental education is shown to have a strong, significant association with academic achievement, possibly showing why Asians, despite speaking a non-English-language at home, outperform Whites. Hispanics who speak English at home perform consistently better than Hispanics who primarily speak Spanish at home, but more poorly than Whites and Asians. Unlike Asians and Whites, Hispanics are at a disadvantage because they are most likely to attend schools that provide a poor education with inexperienced teachers. Because their parents cannot linguistically navigate through the education system, Hispanics lack equal access to college-prep guidance. Lastly, Hispanics are also least likely to participate in pre-literacy activities that would immensely improve their literacy levels, which could increase their likelihood of performing well in school (Tienda and Mitchell 2006).

Research conclusions condemning the use of a non-English language at home are unsupported based on bivariate analyses in this study. However, use of Spanish at home also

24

does not seem to assist Hispanics in their academic achievement, as they perform the most poorly across all analyses. Consistent with studies asserting that language has a small to no effect on academic achievement, other factors like parental education serve as a better explanation of why Asians perform well despite speaking a foreign language at home (Fulgini 1997; Kennedy and Park 1994; Yeung et al. 2000). Furthermore, parental education also seems to explain why Hispanics who speak English at home perform comparably to Whites only if they have at least one parent with a college education.

Future research may consider expanding this study by attempting to understand how the role of schools influences academic achievement. Although English-language Hispanics were shown to surpass White students with respect to class rank, Whites still had higher SAT scores than English-language Hispanics. Hispanics do not attend schools that are of comparable quality to schools that Whites and Asians attend. Because Whites are most likely to live in more affluent areas and attend quality schools, they may receive more college prep and standardized test training. On the other hand, Hispanics represent a disproportionate share of low-quality schools in low socioeconomic areas and do not have access to the resources that would lead to higher SAT scores (Schmid 2001). Also, looking further into how language influences academic achievement, future research may investigate why it seems that language matters more for Hispanic students than it does for Asian students.

25

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30