

Language Proficiency and Home Languages of Students in New York City Elementary and Middle Schools

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Introduction

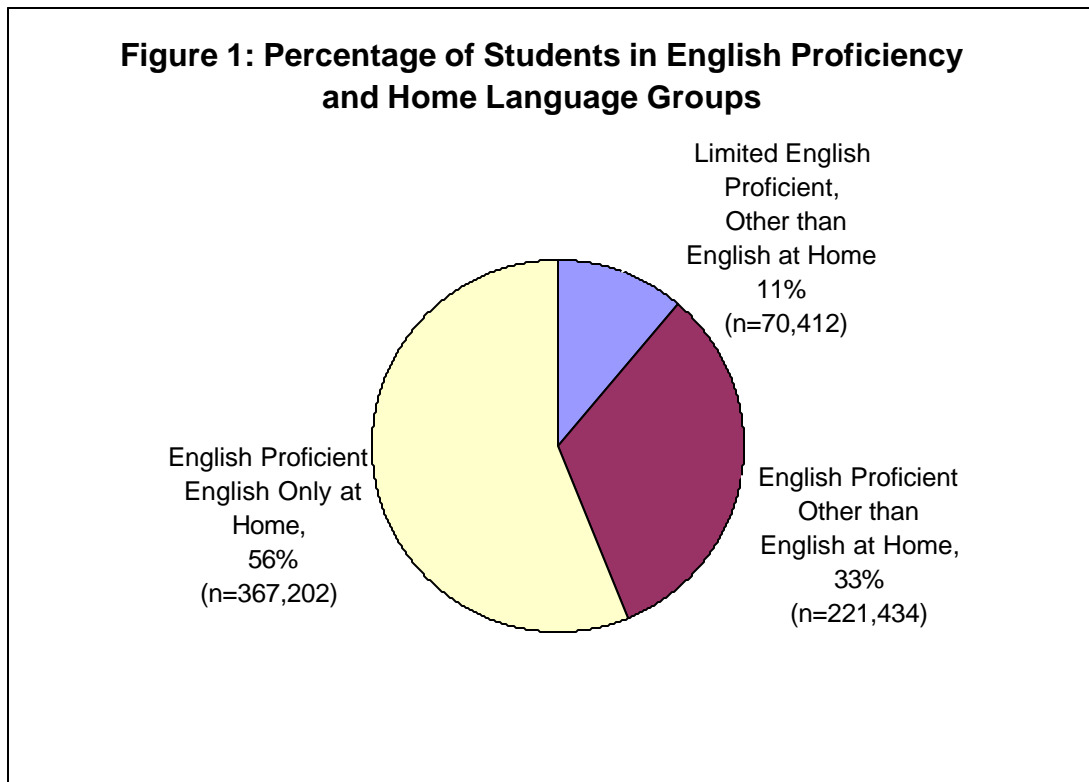
In New York City, elementary and middle school students speak a wide variety of languages in their homes (167) and come from a vast number of countries (192). Over 1 in 10 children are limited English proficient (LEP) and another 3 in 10 are English proficient and from homes where languages other than English are spoken. Given the challenges to educating students with varying language needs, it is important to gain an understanding of the differences and similarities between students who are not yet proficient in English and those who are proficient, and to further distinguish among the English proficient students who are and are not exposed to English at home. What are the differences in the characteristics and school performance of LEP and English proficient students? Do English proficient students exposed to English at home differ from those exposed to other languages?

This report, a companion to our report on immigrant students, answers these and other questions through a statistical portrait of the demographic characteristics and academic performance of New York City's elementary and middle school students by English language proficiency and home language groups. We compare the characteristics and school performance of three groups: 1) students who are LEP (the majority of whom live in homes where a language other than English is spoken); 2) students who are English proficient and live in homes where a language other than English is spoken; and 3) students who are English proficient and live in English speaking homes. The paper also explores differences among students in the top 10 non-English home language groups and concludes with a brief summary. These analyses are based upon student-level data provided by the New York City Department of Education on all students in elementary and middle schools in the 1999-2000 school year.

Students with Language Challenges

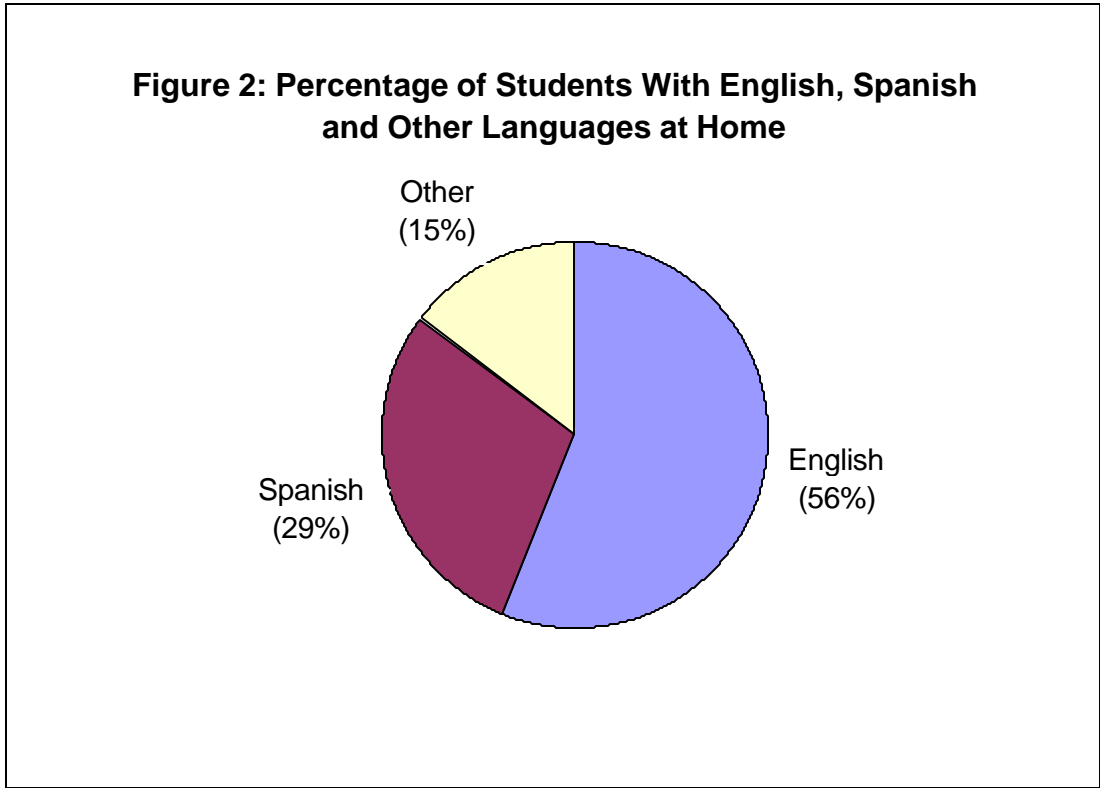
- **Almost 44% of all the students are exposed to languages other than English in the home**

Of the roughly 660,000 students in New York City elementary and middle schools in 1999-2000, approximately 11% (70,412) are designated as LEP based on their scores on a language assessment test (Figure 1). These students come from homes where languages other than English are spoken. Another 34% of the students are English proficient and come from homes where a language other than English is frequently spoken, while the remaining 56% are students who are both English proficient and in primarily English speaking homes.



- 167 languages are spoken in the homes of the students yet 85% of students live in homes where English or Spanish is the primary language spoken.

Home languages include official languages, such as English and French, as well as dialects, such as Vietnamese-French and Provençal. Other than English, Spanish is the most prevalent home language (29% of all students), reflecting the large numbers of families from the Dominican Republic, other Latin American countries and Puerto Rico (Figure 2).



- **Limited English proficient students are disproportionately immigrant, poor and Hispanic compared to English proficient students.**

LEP students have a strikingly high poverty rate (97%) relative to their English proficient peers (Table 1). Additionally, almost half of the LEP students are immigrants while only 22.2% of English proficient other than English students and 6.7% of English proficient English only students are immigrants. The racial/ethnic makeup also differs—approximately 59% of the English proficient English only students are black, while over two-thirds of the LEP students are Hispanic.

Table 1: Characteristics by English Proficiency and Language at Home, 1999-2000

	Percentage of students who are:					
	Poor	Immigrant	Asian	Black	Hispanic	White
Limited English Proficient	97.4%	45.5%	15.3%	4.8%	73.0%	6.7%
English Proficient						
Other than English at home	89.5%	22.2%	20.0%	4.9%	63.0%	12.1%
English only at home	82.2%	6.7%	4.6%	58.6%	17.6%	18.6%
All Students	86.3%	15.9%	10.9%	35.0%	38.5%	15.2%

Notes: Poor are students eligible for free or reduced-price lunch: the percentages poor are calculated as a fraction of the students with nonmissing data. Approximately 5% of all groups are missing data for free or reduced-price lunch eligibility. Immigrants are students not born on U.S. soil. The racial/ethnic groups left out of the table include Native Americans, "other" ethnic groups and students who did not provide their ethnicity. Sample includes students registered on October 31, 1999 in the 1st through 8th and special education grades; 34 students were omitted from this analysis because their language at home was either unknown, sign language or none.

- **One in ten Limited English Proficient students and one in 20 English proficient Non-English at home students is in a full-time special education program.**

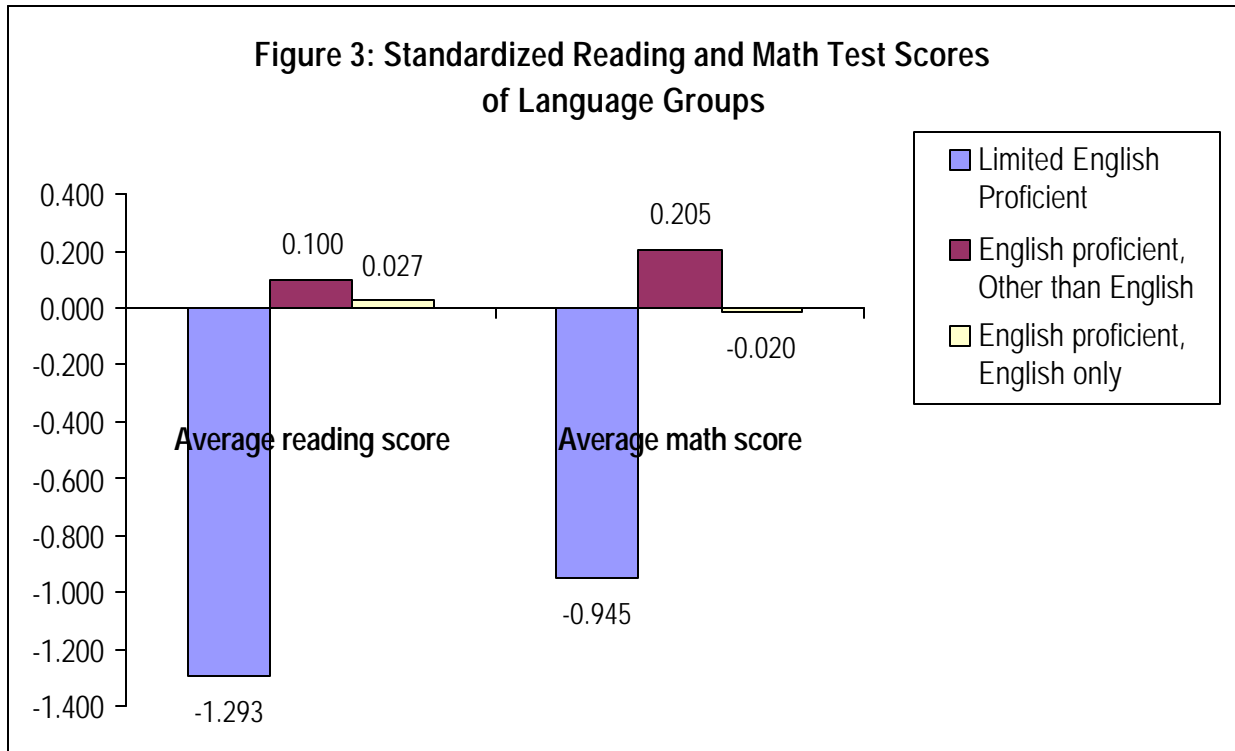
Full-time special education programs are for students with moderate to severe disabilities, such as autism and blindness while part-time special education programs service students with less severe disabilities, such as speech impediments. The full-time special education rate among LEP students (10.3%) is three times higher than the rate among English proficient other than English at home students and almost two times higher than the rate among English proficient English at home students, 3.1% and 5.7% respectively (Table 2). The relative rates of part-time special education participation are also different: English proficient students who are exposed to English at home have the highest rate of participation in part-time special education (7.2%) of the three groups, while English proficient students not exposed to English at home have the lowest rate (5.7%).

Table 2: Participation in Special Education by English Proficiency and Language at Home, 1999-2000

	Number of students	% Full-time special education	% Part-time special education
Limited English Proficient	70,412	10.3%	6.2%
English Proficient			
Other than English at home	221,434	3.1%	5.7%
English only at home	<u>367,202</u>	5.7%	7.2%
All Students	659,048	5.3%	6.6%

- **English Proficient students who are exposed to non-English languages at home score markedly higher on standardized reading and math exams than the other two groups.**

The test scores provided in Figure 3 are measured in z-scores (mean of zero and standard deviation of one), which are calculated by subtracting the average score for all test takers from each student's score and dividing by the standard deviation of scores for all test takers. As shown, English proficient students who are not exposed to English score 0.100 of a standard deviation above average in reading in comparison to 1.293 standard deviations below average among LEP students and 0.027 among English proficient students exposed to English at home. Comparable differences are found in math test scores.



Analysis by Language Group

- **Background characteristics and Limited English proficiency rates vary substantially across the 10 major home languages other than English.**

Urdu speaking students have the highest LEP rate (27.7%) among the top 10 non-English home language groups (Table 3). The next highest rates are found among Spanish, Haitian-Creole and Bengali students. Aside from English at home students who typically do not take the language assessment, the lowest rate of LEP is found among students exposed to Korean at home (11.8%). Very high poverty rates are found among the Spanish, Haitian-Creole and Bengali populations, 96.3%, 96.2%, and 93.1% respectively. At the opposite extreme, Koreans are strikingly non-poor relative to their peers (60.1%). The percentage of each group who are immigrants also differs dramatically: Almost 80% of all students who are exposed to Russian at home were not born in the United States compared to a low of 19% of Spanish speaking students. The Arabic speaking students are the only group with some racial/ethnic diversity, including primarily a mixture of white and Asian students.

Table 3: Characteristics by English and Top 10 Languages Other than English Spoken at Home, 1999-2000

	Number of Students	Percentage of students who are:						
		Limited English Proficient	Poor	Immigrant	Asian	Black	Hispanic	White
English	369,736	0.7%	82.2%	6.7%	4.6%	58.6%	17.6%	18.6%
Spanish	192,037	26.1%	96.3%	18.7%	0.3%	1.4%	97.7%	0.4%
Cantonese	13,445	12.4%	89.7%	19.7%	98.8%	0.1%	0.6%	0.5%
Russian	12,179	12.5%	68.1%	79.2%	1.2%	0.3%	0.2%	98.2%
Haitian-Creole	6,166	23.9%	96.2%	24.6%	0.5%	98.1%	0.5%	0.8%
Korean	6,126	11.8%	60.1%	35.2%	98.6%	0.1%	0.6%	0.6%
Bengali	5,620	23.7%	93.1%	68.8%	96.0%	1.2%	0.7%	1.4%
Chinese-Dialect	5,293	12.3%	80.9%	27.4%	97.7%	0.3%	1.0%	0.9%
Arabic	5,145	23.0%	90.4%	40.5%	17.1%	2.8%	0.8%	78.6%
Urdu	4,938	27.7%	88.2%	63.3%	94.9%	0.4%	1.0%	3.4%
Albanian	3,126	24.1%	91.7%	45.2%	1.1%	0.7%	0.2%	97.6%
Other	<u>35,237</u>	20.1%	79.1%	46.1%	52.3%	13.9%	2.7%	30.9%
All	659,048	11.7%	86.3%	15.9%	10.9%	35.0%	38.5%	15.2%

- **Special education rates vary significantly across the major language groups.**

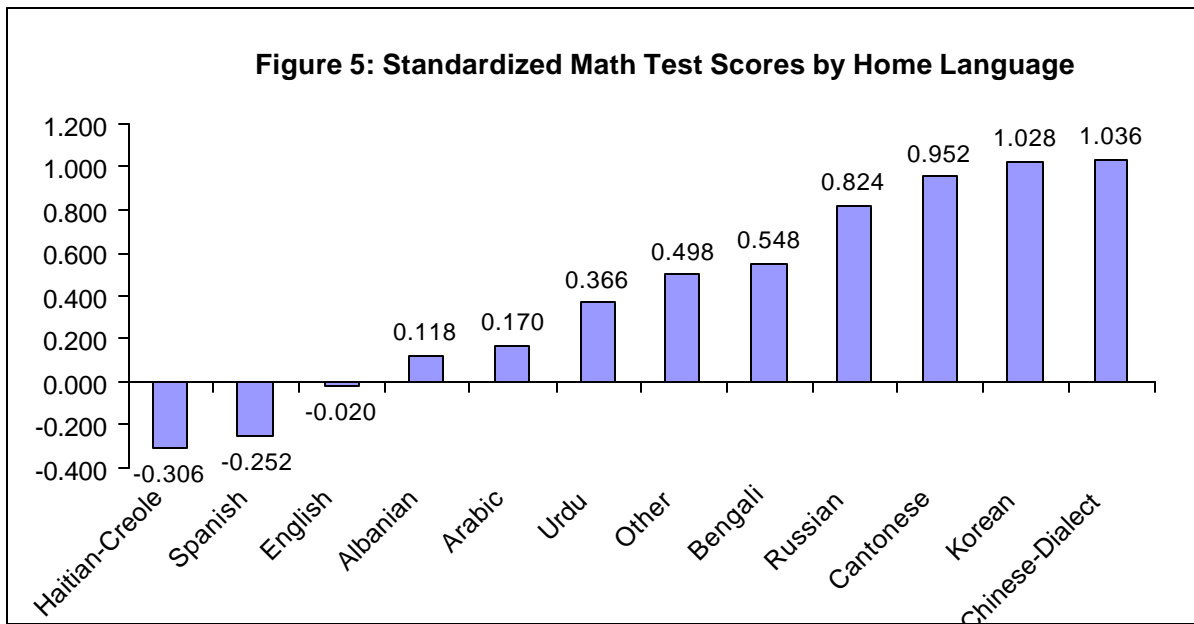
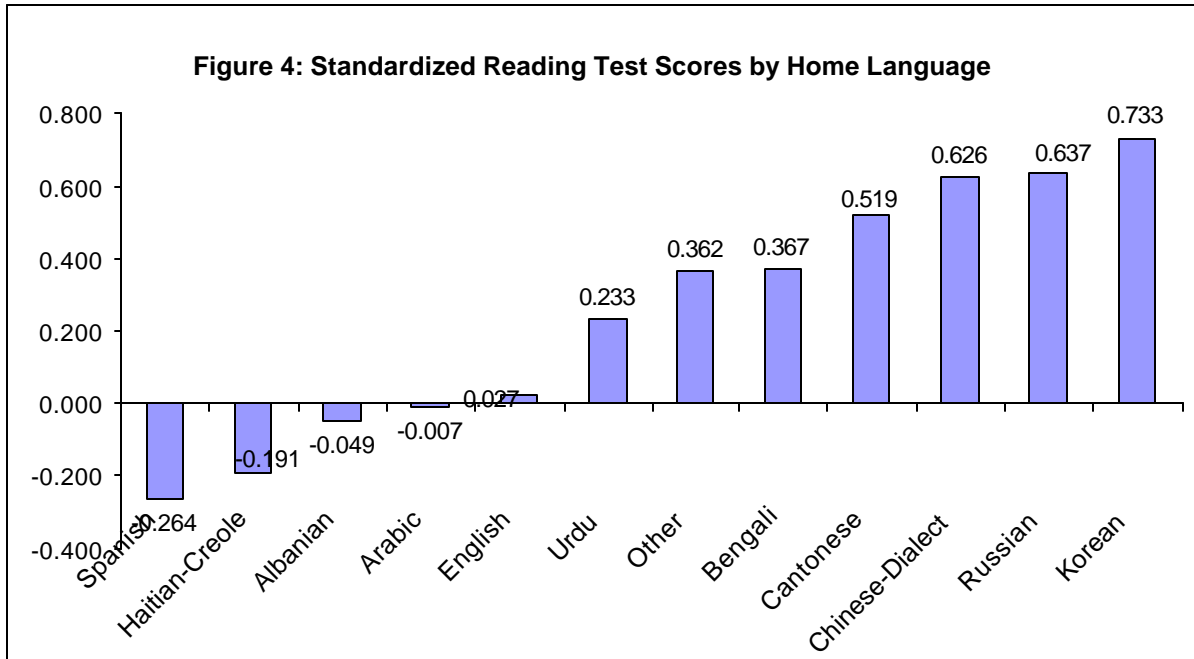
Classification into part-time special education programs is highest among Arabic and Albanian speaking students, 5.2% and 5.4% respectively (Table 4). At the other extreme, Korean and Bengali speaking students have very low rates of participation in part-time special education programs. Spanish speaking students have high rates of classification into full-time special education programs, 6.5%, followed by English speaking students (5.7%).

Table 4: Special Education by Top 10 Languages Other than English Spoken at Home, 1999-2000

	% Full-time special education	% Part-time special education
English	5.7%	7.2%
Spanish	6.5%	7.0%
Cantonese	0.8%	3.3%
Russian	1.0%	3.2%
Haitian-Creole	4.2%	5.1%
Korean	0.4%	1.1%
Bengali	1.0%	1.3%
Chinese-Dialect	0.9%	3.0%
Arabic	2.2%	5.2%
Urdu	1.0%	2.8%
Albanian	1.7%	5.4%
Other	1.8%	4.0%
All Students	5.3%	6.6%

- Test scores vary significantly by the major language groups.

For example, Russian and Korean language students score more than one standard deviation above average in math (1.036 and 1.028 respectively), while English at home students score below average at -0.020 (Figure 5). The Chinese-dialect, Cantonese and Bengali speaking students also do comparatively well on standardized tests. In contrast, students exposed to Spanish, Haitian-Creole or Albanian at home score at the bottom of test score distribution of the top 10 languages.



- In each of the 3 major non-English language groups, LEP students have higher rates of participation in full-time and part-time special education than English proficient students.

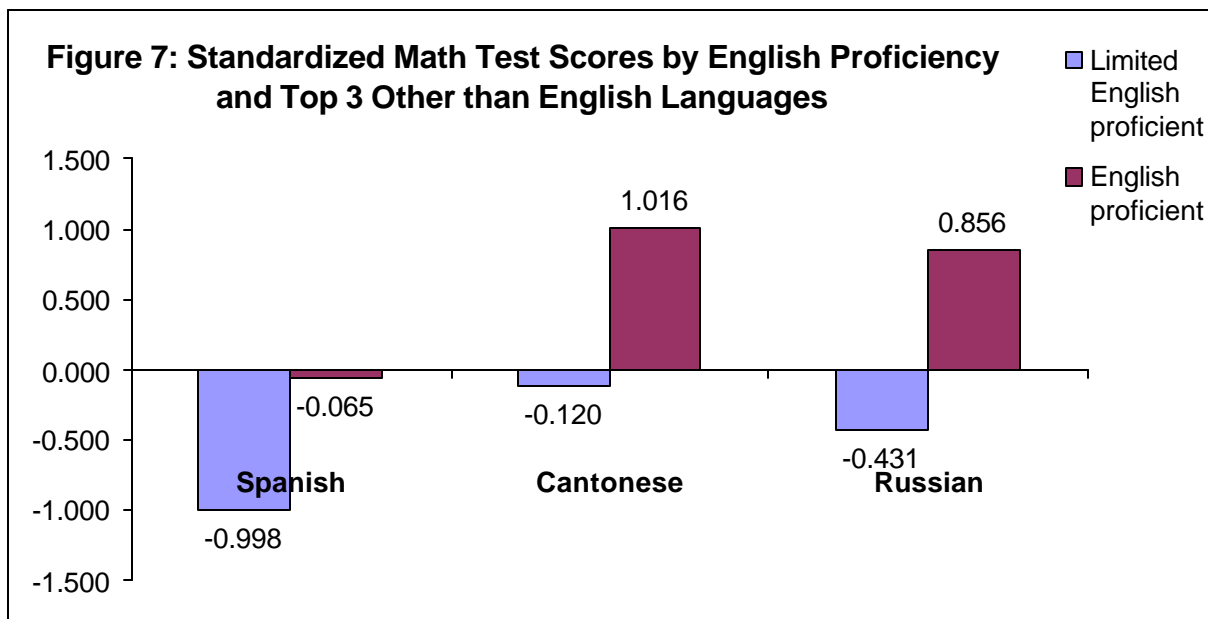
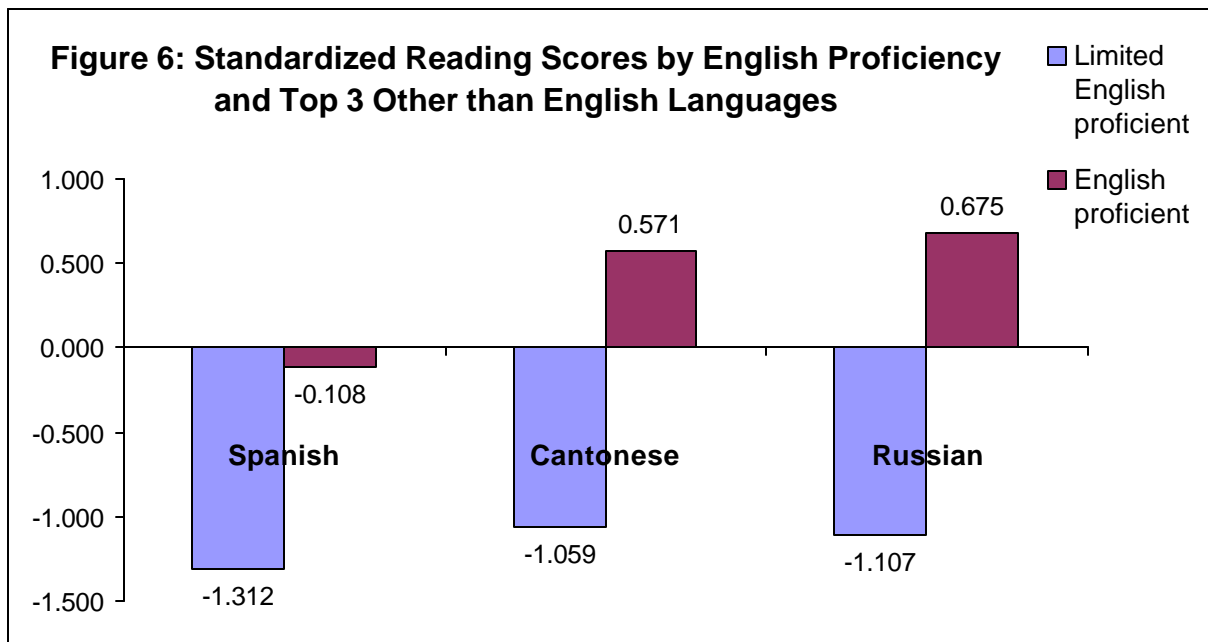
Spanish at home students who are LEP have very high rates of participation in full-time special education (12.5%). Additionally, the part-time special education rate is equivalent for LEP and English proficient Spanish speakers (7.0%) yet differs much more for Cantonese speaking LEP (6.9%) and English proficient (2.8%) students and Russian speaking LEP (5.3%) and English proficient (2.9%) students.

Table 5: Special Education by English Proficiency and Top 3 Languages Other than English Spoken at Home, 1999-2000

	Number of Students	% Full-time special education	% Part-time special education
Limited English Proficient			
Spanish	50,127	12.5%	7.0%
Cantonese	1,665	3.8%	6.9%
Russian	1,521	3.8%	5.3%
All	70,412	10.3%	6.2%
English Proficient, Other than English at Home			
Spanish	141,910	4.3%	7.0%
Cantonese	11,780	0.3%	2.8%
Russian	10,658	0.6%	2.9%
All	221,434	3.1%	5.7%
English Proficient, English Only at Home			
	367,202	5.7%	7.2%

- The disparities in test scores between Spanish speaking LEP and English proficient students is small relative to the disparities between other language LEP and English proficient students.

The difference in average reading scores, for instance, between Spanish at home English proficient and LEP students is 1.204, while the difference is 1.630 between Cantonese speaking English proficient and LEP and 1.782 between Russian English proficient and LEP (Figure 6). Additionally, most English proficient students score above average on standardized tests, yet those who are in Spanish speaking homes score below average.



Conclusion

This statistical profile reveals that almost half of all New York City elementary and middle school students live in homes where a language other than English is frequently spoken. Some of these children are not proficient in English, but most are. Moreover, many of these English proficient students outperform their English at home peers on standardized reading and math tests and have lower rates of participation in special education. The largest group, those exposed to Spanish at home, however, tend to perform poorly on tests even when they are proficient in English, indicating that lack of English proficiency is only one of several obstacles to academic success. These analyses suggest that the performance of students with different language characteristics may be related to other characteristics, such as poverty and race/ethnicity. These possibilities will be explored in future research by the authors.