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## Explaining English Language Proficiency Among Adolescent Immigrant Students

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*This study aims to increase understanding of factors that account for academic English language proficiency in a sample of 274 adolescent first-generation immigrant students from China, the Dominican Republic, Haiti, Central America, and Mexico. Previous research has shown the importance of English language proficiency in predicting academic achievement measured by GPA and achievement tests. The present study describes the academic English language proficiency of immigrant youth after, on average, 7 years in the United States and models factors that contribute to variation. Findings show that although differences in individual student characteristics partially explain variation in English language proficiency, the schools that immigrant youth attended are also important. The amount of time that students spent speaking English in informal social situations is predictive of English language proficiency. These findings demonstrate that social context factors directly affect language learning among adolescent immigrant youth and suggest a crucial role for school and peer interventions.*

**KEYWORDS:** adolescence, language learning, social context, immigration, achievement

Urban schools in the United States are struggling to meet the needs of an increasingly diverse student body. Today, one in five students in the United States is the child of immigrants, and by 2040 that ratio is projected to increase to one in three (Hernandez, Denton, & Macartney, 2007). Extensive research has shown that many newcomers do not acquire sufficient levels of academic English to thrive in their studies (August & Hakuta, 2005; August & Shanahan, 2006; Short & Fitzsimmons, 2007). Inadequately developed English language skills have been associated with lower GPAs, repeating grades, and low graduation rates (Ruiz-de-Velasco & Fix, 2000; Suárez-Orozco & Suárez-Orozco, 2001). According to the National Center for

Educational Statistics (2004), 51% of language-minority students who spoke English with difficulty did not complete high school compared to 31% of students from language-minority homes who spoke English without difficulty and only 10% of monolingual English-speaking students. Less developed academic English proficiency has also been linked to lower performance on standardized tests of academic content area knowledge (Abedi & Lord, 2001; August & Hakuta, 2005; August & Shanahan, 2006; Butler & Castellon-Wellington, 2000; MacSwan & Rolstad, 2003). Taken together, this research indicates that low levels of academic English language proficiency can be an obstacle to academic success and to full participation in academic content.

The well-publicized debates surrounding how fast and how well immigrants learn English largely fail to take account of immigrant youth. Although adolescent immigrant students are the fastest growing segment of the 6th- to 12th-grade population in the United States, they are often overlooked in academic research and in school programs (Ruiz-de-Velasco & Fix, 2000). The majority of research and interventions for newcomer students do not address adolescents; instead, they focus on younger students who immigrate to the United States much earlier (Faltis, 1999). Immigrant students who arrive in the middle and high school years encounter less support for language learning in school, have more complex academic content to learn, and have less time to catch up to their native-speaking peers before encountering gate-keeping assessments that have serious consequences for their future (August & Shanahan, 2006; Short & Fitzsimmons, 2007).

Using data from the Longitudinal Immigrant Student Adaptation (LISA) study, Suárez-Orozco, Suárez-Orozco, and Todorova (2008) developed a model of the relationship between academic performance and key predictors using multiple regression. Five variables were selected to predict academic performance as measured by grade point average (GPA) in the 5th year of

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the study: academic behavioral engagement, English language proficiency, father's employment, mother's education, and family structure. The factors collectively accounted for nearly 30% of the variance in students' GPA. These same factors accounted for 75% when performance on standardized achievement tests in math and reading was substituted as the outcome measure.<sup>1</sup> English language proficiency as measured by the Bilingual Verbal Abilities Test (BVAT; Muñoz-Sandoval, Cummins, Alvarado, & Rued, 1998) explained the most unique variance for both models but was particularly powerful in explaining variation in math and reading achievement (accounting for nearly 6 times the variance than did the other four variables collectively).

## **The Role of Social Context in Adolescent Second-Language Learning**

### **Conversational and Academic Language**

The circumstances and demands of language learning contexts are closely linked to successful academic English language acquisition. The substantial difference between the language used in school and language used in conversation with friends and family is especially pronounced for adolescent students (Bailey & Butler, 2003; Cazden, 2001; Cummins, 1991, 2000). The oral and written language skills necessary to succeed in the academic context of middle and high school is complex and includes the capacity to summarize texts by inferring unstated meanings, analyze texts by explicitly commenting on the author's use of language and genre features, critique argumentation and underlying assumptions, explicitly define concepts, assess the grammaticality of complex sentences, and write and discuss long, coherent texts that conform to implicit genre expectations and reference other texts (Bailey & Butler, 2003; Gibbons, 1998; Johns, 1997; Schleppegrell, 2001). Confronted with the complexity and high stakes of learning English in postprimary settings, a host of other factors may come into play for adolescent second-language learners including motivational correlates (e.g., frustration, embarrassment, and anxiety), values and beliefs, and behavioral outcomes such as disengagement from school (Lightbown & Spada, 2006). The importance of better understanding adolescent English language learning is evidenced in the widening gap between English learners and their native English-speaking peers throughout childhood and adolescence (Collier, 1987; Saunders & O'Brien, 2006).

Because of the complexity of language learning in middle and high school contexts, generalization from children to adolescents is difficult (Lightbown & Spada, 2006). Studying young language learners, Cummins (1991, 2000) proposed that nonacademic, conversational language skills can be learned within about 2 years, whereas academic language, which is less contextualized and more cognitively demanding, can take much longer to acquire. Current research indicates that children and youth learning English in the U.S. context may need 4 to 7 years or more to develop levels of academic

English equivalent to native English-speaking peers (Collier, 1987, 1995; Hakuta, Butler, & Witt, 2000).

Measures of language proficiency, however, vary widely in the literature, making comparisons across groups difficult. Language-proficiency constructs that have been assessed range from oral to literate skills and from conversational to academic registers (Saunders & O'Brien, 2006). Few studies have compared different groups of English language learners using the same norm-referenced proficiency measures, and even fewer studies have been conducted with secondary-level students. Comparative research on the development of academic English language proficiency for different immigrant groups is needed to further our understanding and theoretical perspectives on second-language acquisition (August & Shanahan, 2006).

### **Second-Language Acquisition**

Second-language acquisition is a complex process; variable success cannot be explained by a single factor or theory (Gass & Selinker, 2001). Research has shown that both individual and social factors work together to facilitate or conversely to stymie second-language development (August & Hakuta, 2005; Gass & Selinker, 2001). Recent research shows that, although differences in individual student characteristics partially explain variation in English language learning outcomes, social context factors are also important (Goldenberg, Rueda, & August, 2006; Lightbown & Spada, 2006). Social context factors are elements of the complex worlds in which youth live that directly influence their learning outcomes by providing more or better opportunities to some and less frequent or less advantageous opportunities to others (Goldenberg et al., 2006).

Recognizing that adolescent immigrant students negotiate multiple social contexts that influence their individual language learning outcomes, the current study considered individual and social context factors that have been shown by previous research to have an important impact on English language proficiency and, consequently, academic achievement for adolescent immigrant students within an ecological model (Bronfenbrenner, 1977). Scholars studying second-language acquisition have acknowledged the importance of an ecological perspective when studying language learning. For example, Brisk (2006) developed a model for understanding how linguistic, cultural, economic, political, and social factors affect students directly or indirectly through schools, peers, families, neighborhoods, and media. Taking an ecological perspective and recognizing the importance of factors that bilingual scholars have identified in the research literature, factors in this study were conceptualized as influencing individuals both directly and indirectly from the most proximal level to the student outward to the most distal: individual (age and time in the United States), home environment (maternal education and parental English skills), exposure to English at school and in informal social situations, and, finally, the larger environment of schools as measured by school quality factors.

*Age.* Although the internal process of acquiring a second language has not been shown to differ for children and for adults, the circumstances in which learning takes place vary with age and may lead to differential success for learners (Harley & Wang, 1997; Marinova-Todd, Marshall, & Snow, 2000). Developmental effects have been shown wherein adult learners acquire a second language more rapidly than younger children (especially in the initial stages), but over time children typically achieve higher levels of proficiency and more native-like pronunciation (Marinova-Todd et al., 2000). Adolescent language learners do not fit neatly into the ongoing debate about age-related thresholds, and further research is needed to determine the factors that may mediate the effect of age in their process of language acquisition. All students continue to develop their language skills throughout middle and high school (Nippold, 1998); relative to native speakers their same age, the English proficiency of English language learners has been shown to decline as grade level increases (Hakuta et al., 2000; Saunders & O'Brien, 2006).

*Parental education and parental English language proficiency.* There is a clear link between parental education and the development of academic second-language proficiency (Entwisle & Anstone, 1994; Hakuta et al., 2000). More educated parents provide language environments at home that are more similar to the language environments of school (Dickinson & Tabors, 2001). In particular, the level of maternal education has been related to language development, wherein more educated mothers expose children and youth to more academically oriented vocabulary and read more often from books that are valued in school (Goldenberg et al., 2006). Whether in the native language or in English, parental education affects the development of academic English, as learning to read and write in any language begins long before children enter school through engagement in activities with parents and caregivers who support language and literacy development (Heath, 1983; Snow, Burns, & Griffin, 1998). The level of parental English language skills may index the support children receive for learning English at home (Páez, 2001; Portes & Hao, 1998). For immigrant children and youth, the home language environment is mediated by cultural values and practices (Delgado-Gaitan, 1990).

*Exposure.* The maxim “less contact, less learning” succinctly summarizes the arguments around the importance of exposure to English through language input and instruction (Gass & Selinker, 2001, p. 333). School is the primary site of language learning for many immigrant children and youth, not only through instruction but also through socialization with English-speaking peers and adults (Jia & Aaronson, 2003; Olsen, 1997; Valdés, 2001). Adolescent immigrant students negotiate among home, school, and peer contexts in ways that are distinct from adults and children. Jia and Aaronson (2003) suggested that agency may be a key component of exposure, wherein older students choose linguistic environments that support the maintenance of their native language more frequently than do younger students. Evidence

suggests that language usage differs substantially across environments (e.g., at home, at school, and with friends) for adolescents. To capture the experiences and opportunities of adolescent second-language learners, measures of exposure need to differentiate among domains of language use (Jia & Aaronson, 2003).

*School quality.* Immigrant students' experiences mirror the learning experiences of all students; those who attend well-resourced, high-quality schools are more likely to demonstrate high academic achievement (Fry, 2005; Orfield & Lee, 2006; Stiefel, Schwartz, & Ellen, 2006). The quality of educational environments has been indexed through school-level variables including school size, school poverty, and standardized achievement test scores such as those mandated by No Child Left Behind. Factors associated with these school quality variables include ethnic group, parental education level, and other home and family characteristics associated with student achievement (Fry, 2005). Social context variables, including school quality variables, that have effects across groups may be masked in comparative studies that control for culture, national origin, or language group (McLoyd & Steinberg, 1998).

Language learning outcomes have also been related to school factors. When language proficiency levels were disaggregated by school poverty level, students who attended high-poverty schools were significantly less proficient in academic English than were students attending schools with lower levels of school poverty (Hakuta et al., 2000). Furthermore, although consistent, high-quality bilingual education programs have been associated with language learning gains, inconsistent and low-quality bilingual support, which has been associated with struggling schools, has been found to lead to less optimal outcomes (Thomas & Collier, 2002).

Valdés (2001) and Olsen (1997) demonstrated that the environment of schooling extends beyond the classroom into the hallways and after-school activities of students. These ethnographies documented the profound disadvantages that the de facto segregation of English-language learners from English-speaking peers imposed on immigrant students. Furthermore, Orfield and Yun (1999) have shown that such "linguistic segregation" is often coupled with economic and racial segregation in schools in the United States. This triple segregation culminated in low-quality contexts of learning for newcomer immigrant students (Orfield & Lee, 2006; Orfield & Yun, 1999; Suárez-Orozco et al., 2008).

## The Present Study

Previous research with data from the LISA study established the critical role of English language proficiency in predicting academic achievement (Suárez-Orozco et al., 2008). The present study contributes to the literature in this area by examining some of the individual and social context factors that have been shown to influence the development of English language



proficiency. In addition, the present study comparatively examines different immigrant groups and their language-acquisition patterns, which few studies have done (August & Hakuta, 2005). Finally, we extend previous work by specifically examining the language development of adolescent English language learners, a group about whom little is currently known (Faltis, 1999; Ruiz-de-Velasco & Fix, 2000; Short & Fitzsimmons, 2007).

In this article, descriptive statistics and analyses of variance allowed for examination of patterns of English language proficiency development across and among country of origin groups in this sample. Associations between students' English language proficiency and social context factors were further examined using a hierarchical multiple regression model that allowed us to investigate the relative contribution of individual, home, language use in school and informal social settings, and school variables to English language proficiency. Data from the 5th year of the LISA study, when participants had been in the United States for 6.9 years on average, were studied to maximize the opportunities for students to learn and demonstrate their academic English language abilities. This rationale is supported by research showing that second-language learners in the U.S. context may need 7 or more years to sufficiently develop academic English language proficiency to participate in schooling.

Focusing on language outcomes in the 5th year of the study, we have the following objectives in this article:

1. Describe patterns of English language proficiency and language use in a diverse sample of adolescent newcomer immigrant students
2. Examine whether social context factors (individual, home language environment, exposure to English at school and in informal social situations, and school quality) affect English language proficiency outcomes
3. Consider whether the effect of social context factors on English language proficiency varies as a function of home, exposure to English, or school quality factors

## Method

### Procedures

To examine the patterns of language learning among adolescent immigrant students, this study utilized data from the LISA study (Suárez-Orozco & Suárez-Orozco, 2001). The LISA study was a 5-year longitudinal study that used interdisciplinary and comparative approaches, mixed methods, and triangulated data in order to document patterns of adaptation among recently arrived immigrant youth from Central America, China, the Dominican Republic, Haiti, and Mexico.

*Recruitment.* Schools in Boston and San Francisco with high densities of immigrant students were selected for participation in this study. Participating schools provided access to students, teachers, staff, and school



records. With the help of school personnel, youth who potentially met the inclusion criteria (newcomer immigrant students whose parents were both from the same country of origin) were identified.

*Data-collection overview.* Bilingual and bicultural (largely from the participants' countries of origin) research assistants (RAs) described the project to potential participants and requested their involvement. The RAs also served as cultural advisors by providing feedback on the validity of interview questions for students of their country of origin, assisting in assuring the validity of translations and contextualizing emerging findings. In addition to recruitment of study participants, RAs were responsible for conducting student and parent interviews as well as translating completed interviews and administering the English Language Proficiency test.

## Participants

A diverse sample ( $N = 274$ , 53% female) of newcomer immigrant students was recruited from seven school districts across the Boston and San Francisco metropolitan areas. Participants ranged in age from 14 to 19 years old in the 5th year of the study, with a mean age of 16.7 years ( $SD = 1.6$ ). All of the participants in the study had been born abroad, had parents who were born in the same country, had spent at least two thirds of their lives in their country of origin (7 to 14 years on arrival), and spoke a native language other than English on arrival. Means for demographic variables (gender, household composition, parental employment, parental education) were comparable among groups.<sup>2</sup> Attrition rates were low over the 5 years of data collection, and comparison of 1st year and 5th year samples on relevant characteristics revealed few differences.<sup>3</sup>

This article reports on the 274 participants for whom data on the measures included in this analysis were complete. Significant differences between the analytic sample and the 35 students with missing information were assessed using chi-square measures of association (for country of origin, gender, and maternal education) and  $t$  tests (for GPA in Year 5, English language proficiency in Year 5, and the school English language arts [ELA] proficiency rate). The only statistically significant difference between groups was found in GPA ( $t = -2.7, p < .01$ ), wherein the sample mean was significantly higher (2.9) than the mean for the students who were excluded (2.1).

## Instrument Development

The LISA study involved students from distinct language and cultural backgrounds. Cross-cultural research with immigrant youth challenges traditional social science assumptions around validity and reliability (Hughes, Seidman, & Edwards, 1993; McLoyd & Steinberg, 1998). Questions and prompts that are valid for one group may not be valid nor culturally and linguistically unbiased when used with another. We thus sought to develop

a protocol that would be relevant and equivalent across groups. Scale development was informed by the “insider” RAs, ethnographic fieldwork, and our bicultural protocol development teams. Structured interviews were translated into Spanish, Haitian Creole, Mandarin, and Cantonese by bilingual research teams.

## Measures

*English language proficiency.* The English Language Proficiency subtest of the BVAT (Muñoz-Sandoval et al., 1998) was used as the measure of English language proficiency because it represented the best measure available at the time of students’ linguistic competitiveness in school with English-speaking peers. The English Language Proficiency subtest of the BVAT was individually administered to participants in English by bilingual RAs in the 5th year of the study. RAs were trained in 2-hour sessions on the administration of this standardized test. Age-normed English language proficiency standard scores were used to report the level of academic English the sample demonstrated in relation to English-speaking students their same age. The BVAT, which was developed from the Woodcock Johnson cognitive battery (Woodcock, McGrew, & Mather, 2001), was viewed as more academic than other available measures of oral language proficiency.

The test measures conceptual knowledge of academic English including discrete lexical meaning, lexical relations, and conceptual relations. The BVAT is composed of three subtests. First, in Picture Vocabulary, a picture of an object is presented to the student to elicit a single-word answer. Second, in Oral Vocabulary, a word-association task, students supply a synonym or antonym in response to a spoken and pictured object. Third, in Verbal Analogies, students hear and are shown an analogy between two words and are asked to supply a word that fits the same relationship in a second analogy as in the following examples: “Hungry is to eat, as tired is to sleep,” or “a.m. is to p.m., as prehistoric is to historic” (Muñoz-Sandoval et al., 1998, p. 123).

The BVAT has been normed on all of the languages represented in the study. The English language proficiency scale has high internal reliability across age groups (Cronbach’s  $\alpha = .96$ ; Muñoz-Sandoval et al., 1998, p. 68). English language normative data for the BVAT were based on 8,818 participants in more than 100 geographically diverse U.S. communities used in the standardization of the Woodcock-Johnson III (Woodcock et al., 2001) and provide the basis for interpretation of English language proficiency standard scores. Standard scores have a mean of 100 and a standard deviation of 15. A standard score of 100 indicates that the student has performed at the average level for students his or her age. Construct validity was established by comparing estimates of verbal English language ability obtained by two parallel independent testing procedures.

*Demographic data.* Data regarding parental education, parental occupation, and household structure were collected using standardized fixed-choice

question formats imbedded in the 1st- and 5th-year parent interviews. RAs conducted the interviews in the language of the parents' preference in the parents' home.

*Student demographic data.* Data regarding country of origin, age, gender, and time in the United States (length of residence) were collected using standardized question formats imbedded in the 1st- and 5th-year student interviews.<sup>4</sup> Interviews were administered orally in the language of the students' preference.

*Maternal education.* Level of maternal education was collected during parent interviews in the 1st year of the study by asking mothers or maternal caregivers the number of years they had attended school and the degrees they completed. RAs conducted interviews in the language of the parents' preference in the parents' home. Data were coded as follows: 1 = *completion of high school or more than 12 years of schooling*, 0 = *less than 12 years of schooling nor completion of high school*.

*Parental English Skills Scale.* Parent's English skills were assessed by self-report in the 5th year of the study. RAs conducted interviews in the language of the parents' preference in the parents' home. Parents were asked to respond on a 4-point scale (1 = *not at all*, 2 = *not well*, 3 = *well*, 4 = *very well*) to questions: (a) "How well do you understand English?" (b) "How well do you speak English?" (c) "How well do you read English?" (d) "How well do you write English?" These four items were combined as the parental English Language Skills Scale ranging from 4 to 16 points. The alpha coefficient for the four items measuring parental English language skills was .90.

*English language use.* Data regarding use of English in home, at school, and in informal settings were collected using the demographic interview imbedded in the BVAT. Students were asked to name the primary language and other languages that they spoke with others in three environments: at home, in school, and in informal social situations. Students were then asked to estimate the percentage of time (more than 75%, 75%, 50%, 25%, or less than 25%) that they spoke these languages in each setting. Interviews were administered orally in the language of the students' preference.

*School quality indicators.* Three indicators of school quality were collected about the schools that participants attended from publicly available school district Web sites: (a) School ELA proficiency rate (the percentage of the students in the school scoring at the proficient or advanced level on the state-mandated ELA content area assessment; STAR in California and MCAS in Massachusetts), (b) school poverty rate (the percentage of students in the school who were receiving free lunch), and (c) school minority representation rate (the percentage of non-White students attending the school).

Table 1  
**Analysis of Variance of English Language Proficiency  
 Scores by Country of Origin**

	Total Sample	China ( <i>n</i> = 62)	Dominican Republic ( <i>n</i> = 56)	Central America ( <i>n</i> = 51)	Haiti ( <i>n</i> = 39)	Mexico ( <i>n</i> = 66)
Mean English language proficiency score***	75.1	86.1	71.2	69.2	75.2	72.6
<i>SD</i>	19.8	28.8	13.6	15.7	12.2	16.6

Note. *N* = 274.

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

## Results

### English Language Proficiency

The sample of 274 students had, on average, been in the United States for 6.9 years (*SD* = 1.3) and were 16.7 years old (*SD* = 1.6) by the 5th year of the study. Time in the United States was positively correlated with students' English language proficiency score ( $r = .27, p < .001$ ), such that those who had been here longer tended to demonstrate higher levels of proficiency relative to their English-speaking peers. After nearly 7 years in the United States, only 19 students (or 7.4% of the sample) scored at or above the normed mean for English speakers of the same age on the English Language Proficiency subtest (a standard score of 100 or greater; see Table 1). The mean score for the entire sample was 75.1, with students' scores ranging from 31 to 156 (*SD* = 19.8). On average, the sample demonstrated academic English proficiency scores equivalent to the second percentile of native English-speaking peers. Three fourths of participants fell more than one standard deviation (15 points) under the mean. Only 25.2% of the total sample fell within one standard deviation of the average native English speaker of their age.

Descriptive statistics for the sample are summarized in Table 1. The average English language proficiency score of Chinese students was highest and showed the most within-group variation, whereas Spanish-speaking groups showed the lowest mean English language proficiency score. Analysis of variance yielded significant group differences by country of origin,  $F(4, 269) = 7.39, p < .001$ . Post hoc comparisons were conducted using the Tukey adjustment for multiple comparisons. Chinese students were significantly higher in English language proficiency than all other groups: 16.9 points above Central American students on average ( $p < .001$ ), 14.9 points above Dominican students ( $p < .001$ ), 13.5 points above Mexican students ( $p < .01$ ), and 10.9 points above Haitian students ( $p < .05$ ). There were no other significant group differences.

Table 2  
**Descriptive Statistics for Language Use**

	Percentage of Total		
	English Use at School	English Use at Home	English Use in Informal Settings
75% or more of the time	78.5	9.1	44.5
50% of the time	14.2	15.0	30.3
25% or less of the time	7.3	75.9	25.2

Note.  $N = 274$ .

### English Language Use

Students were asked what percentage of time they spent speaking in English at school while in class. In the last year of the study, 78.5% reported that they spent more than 75% of their time speaking in English at school, whereas 21.5% reported spending half or less than half their time interacting in English at school. Nearly the entire sample (93.8%) began their education in the United States with some form of language learning support at school (including sheltered instruction, English as a second language, and dual-language instruction). By the 4th year of the study, nearly three fourths of the students had begun taking classes outside of the bilingual programs, and 41% were entirely enrolled in mainstream classes and received no additional instruction designed to support their language needs. Students' reported use of English in school in the 5th year of the study was positively correlated with English language proficiency ( $r = .31, p < .001$ ). There were no significant differences in language use between groups.

Almost all students spoke nearly exclusively in their first language at home (75.9%) after nearly 7 years in the United States on average. Students' use of English at home in the 5th year of the study was weakly positively correlated with English language proficiency ( $r = .13, p < .05$ ). In nonfamily and nonclassroom situations (e.g., work settings, with friends, in the cafeterias and hallways of school, and in neighborhood contexts), the students revealed a range of patterns of language use. As shown in Table 2, 44.5% used English in informal settings most of the time (more than 75% of the time), whereas 30.3% reported using English about half the time. Students' use of English in informal settings in the 5th year of the study was strongly positively correlated with English language proficiency ( $r = .41, p < .001$ ).

### School Quality Indicators

Three indicators of school quality available from the school district public Web sites were analyzed: (a) school poverty rate (the percentage of students in the school receiving free lunch), (b) school minority representation

Table 3  
**Analysis of Variance of School Quality Factors by Country of Origin**

	Total Sample	China ( <i>n</i> = 62)	Dominican Republic ( <i>n</i> = 56)	Central America ( <i>n</i> = 51)	Haiti ( <i>n</i> = 39)	Mexico ( <i>n</i> = 66)
School ELA proficiency rate***	32.1	63.8	20.8	21.0	39.1	16.6
<i>SD</i>	25.7	27.5	13.4	14.2	14.4	13.7
School poverty rate***	48.6	32.5	64.3	44.2	45.4	55.6
<i>SD</i>	23.8	25.4	8.7	22.1	20.1	23.7
School minority representation rate***	77.9	54.5	91.0	84.3	73.0	86.6
<i>SD</i>	23.9	29.1	7.6	17.3	18.3	18.1

Note. *N* = 274. ELA = English Language Arts.

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

rate (the percentage of non-White students attending the school), and (c) school ELA (English Language Arts) proficiency rate (the percentage of the students in the school scoring at the proficient or advanced level on the state-mandated ELA content area assessment). Descriptive statistics are presented in Table 3. The schools the sample attended were characterized by high percentages of students living in poverty. On average, the school poverty rate in schools included in the study showed 48.6% (*SD* = 23.8) of students receiving free lunch; this variable was negatively correlated with English language proficiency ( $r = -.28, p < .001$ ). The minority representation rate at the schools our students attended was, on average, 77.9% (*SD* = 23.9), and it showed a strong negative relationship with students' English language proficiency ( $r = -.40, p < .001$ ). In the schools our students attended, on average, 32.1% of students (*SD* = 25.7) tested at or above proficiency in ELA, with some schools having as little as 4% of their student body at or above proficiency. The relationship between this measure of school quality and English language proficiency was strongly positive ( $r = .48, p < .001$ ), wherein those students attending schools with a greater proportion of students scoring at or above proficiency in ELA were more likely to have high English language proficiency scores. Taken together, these indicators of school quality suggest that the immigrant students in this sample attended schools that were far from optimal.

Correlational analysis revealed that these three factors tend to covary. Minority representation rate and school poverty rate were strongly positively correlated ( $r = .78, p < .001$ ), such that schools with more minority students also had more low-income students. The ELA proficiency rate was highly negatively correlated with both the school poverty rate ( $r = -.65, p < .001$ ) and the minority representation rate ( $r = -.78, p < .001$ ) of the school. Thus, poverty and minority concentration co-occurred in schools where lower percentages of students passed the district high-stakes ELA proficiency exams.

Because of the high correlation between school minority representation rate and the other two school quality variables, only school poverty rate and school ELA proficiency rate were included in the regression.

Analysis of variance of the three school factors yielded significant differences among country of origin groups for school ELA proficiency rate,  $F(4, 269) = 73.19, p < .001$ , school poverty rate,  $F(4, 269) = 19.42, p < .001$ , and school minority representation rate,  $F(4, 269) = 33.36, p < .001$ . Chinese students attended schools that were, on average, lowest in minority representation and in poverty and highest in ELA proficiency rates; Mexican and Dominican students attended schools that were, on average, highest in poverty and minority representation and lowest in ELA proficiency rates.

Post hoc comparisons were conducted on all pairwise country of origin groups (Tukey's honestly significant difference). Schools that Dominican, Central American, and Mexican students attended were not significantly different from each other in school ELA proficiency rate; however, Chinese students attended schools that were higher in school ELA proficiency rate than those of any other group ( $p < .001$ ), and Haitian students attended schools that were significantly lower than those of the three Spanish-speaking groups ( $p < .001$ ).

Chinese students attended schools that were significantly lower in school poverty rate than were the schools that Mexican or Dominican students attended on average ( $p < .001$ ). The schools that Central American and Haitian students attended were lower in poverty than were the schools that Dominican students attended ( $p < .001$ ).

The schools that Dominican, Central American, and Mexican students attended had the highest minority representation rate and were not significantly different from each other. Chinese students attended schools that were lower in minority representation than those of all other groups ( $p < .001$ ). Haitian students attended schools that were lower in minority representation than those of Dominican ( $p < .001$ ) or Mexican ( $p < .01$ ) students.

### Explaining English Language Proficiency

Zero-order correlations among the factors included in the model are shown in Table 4. Based on previous research and preliminary analysis of these correlations, eight variables were selected as predictors of English language proficiency. The relative contributions of this combination of individual variables (age, time in the United States), parental and home characteristics (maternal education, parental English skills), the variables of how much the student had the opportunity to speak in English in informal settings and in school, and school quality variables (ELA proficiency rate, percentage low income) were tested using hierarchical multiple regression as shown in Figure 1.

Results of the hierarchical regression analyses are summarized in Table 5. Table 5 includes standardized ( $\beta$ ) and unstandardized coefficients for each predictor and computations of the change in  $R^2$  between models. This



Table 4  
Correlations for the Study Variables

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. English language proficiency	75.1	19.8	1								
2. Age (years)	11.7	1.6	-.23***	1							
3. Time in the United States (months)	82.2	15.9	.27***	<i>ns</i>	1						
4. Maternal education	0.3	0.47	.29***	<i>ns</i>	<i>ns</i>	1					
5. Parental English skills	7.5	2.9	.35***	<i>ns</i>	.19**	.27***	1				
6. English use in school	3.7	0.6	.31***	-.12*	.17**	.12*	.17**	1			
7. English use in informal settings	3.1	1.0	.41***	-.21***	<i>ns</i>	.16**	.29***	.42***	1		
8. School ELA proficiency rate	32.1	25.7	.48***	<i>ns</i>	<i>ns</i>	.23***	.24***	<i>ns</i>	.18**	1	
9. School poverty rate	48.6	23.8	-.28***	<i>ns</i>	<i>ns</i>	-.14*	-.26***	<i>ns</i>	-.15*	-.65***	1

Note. *N* = 274. ELA = English Language Arts.

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

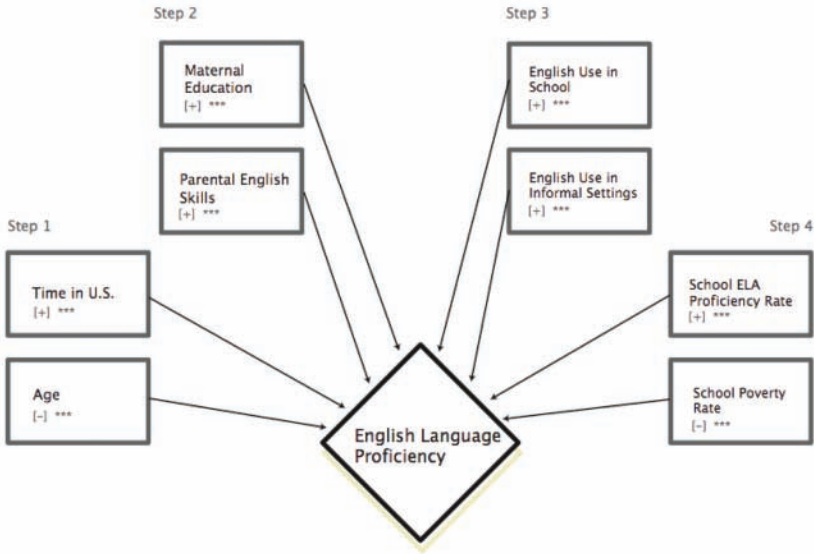


Figure 1. Explaining English language proficiency.

Note. ELA = English Language arts. [+] = positive association; [-] = negative association. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

method allowed us to identify the relative predictive importance of each group of predictor variables and select the combination of variables that best explained the variance in English language proficiency as measured by the English Language Proficiency subtest of the BVAT. Sets of variables were entered into the model from the most proximal to the most distal systems (Bronfenbrenner, 1977): individual variables, home language environment variables, exposure to English at school and in informal social situations; and school quality factors.

Individual variables were important. Both student age and the amount of time in the United States remained strongly significant throughout. Maternal education and parental English skills entered the model as significant predictors of students' English language proficiency scores but decreased both in terms of magnitude ( $\beta$ ) and significance when exposure to English at school and in informal social situations entered in the third model. The opportunity to use English in informal settings was significant and showed the largest effect size; students who reported spending more time using English with others in informal settings were more likely to demonstrate higher English proficiency outcomes.

School quality factors explained an additional 12% of the variation in students' English language proficiency scores. In particular, school ELA

**Table 5**  
**Summary of Hierarchical Regression Analysis for Variables Predicting English Language Proficiency**

Independent Variable	Model 1, Individual			Model 2, Home			Model 3, Social Context			Model 4, School		
	B	SEB	$\beta$	B	SEB	$\beta$	B	SEB	$\beta$	B	SEB	$\beta$
Age	-3.25	0.72	-.26***	-2.95	0.68	-.24***	-2.16	0.66	-.17***	-2.10	0.60	-.17***
Time in United States	0.37	0.07	.29***	0.28	0.07	.22***	0.24	0.06	.19***	0.25	0.06	.20***
Maternal education				7.77	2.31	.18***	6.82	2.21	.16**	4.17	2.04	.10*
Parental English skills				1.92	0.41	.26***	1.39	0.40	.19***	0.96	0.38	.13*
English use in school							3.51	1.72	.11*	3.19	1.56	.11*
English use in informal settings							4.73	1.20	.23***	4.02	1.10	.19***
School ELA proficiency rate										0.30	0.05	.38***
School poverty rate										0.03	0.05	.03
R <sup>2</sup>					.14***			.33***			.45***	
$\Delta R^2$					.12***			.07***			.12***	

Note. N = 274. ELA = English Language arts.

\*p < .05. \*\*p < .01. \*\*\*p < .001.

proficiency rate was statistically significant in the model and demonstrated the largest effect size ( $\beta$ ). Thus, students who attended schools where a higher percentage of the students tested at the proficient or advanced level on the state's ELA exam were more likely to have higher English language proficiency scores than students who attended a school where a greater proportion of its students scored below the proficient level. School poverty rate did not reach significance in the model.

The final model explains the greatest amount of variation (45%) and is statistically significant ( $p < .001$ ). Seven factors in the final model remained significant. The school quality factor, ELA proficiency rate, was the strongest predictor in the final model. The final model further reveals that the individual demographic factors of age and time in the United States remained highly significant across model specifications. Examination of the standardized coefficients ( $\beta$ ) across the models suggests that the home language environment variables, maternal education and parental English skills, may be mediated by the school quality factor, school ELA proficiency rate. English use in informal settings was also highly predictive of English language proficiency in this sample. In total, this combination of variables allowed us to explain almost half (45%) of the variation in English language proficiency scores.

## Discussion

A central aim of this study was to examine some of the social context variables that contribute to patterns of language learning among newcomer adolescent immigrant students from China, the Dominican Republic, Haiti, Central America, and Mexico. Research indicates that social context variables are associated with second-language learning outcomes. Previous research has not fully investigated the impact of social context variables within a large comparative sample. Furthermore, findings of this study extend existing research by examining the language development of adolescent English language learners, a group about whom little is currently known (Faltis, 1999; Ruiz-de-Velasco & Fix, 2000; Short & Fitzsimmons, 2007). To better understand the effect of individual variables, home language environment variables, exposure to English at school and in informal social situations, as well as school quality factors on the development of academic English language proficiency, we considered variables within an ecological framework (Bronfenbrenner, 1977).

### English Language Proficiency

Results from this study show that acquiring academic English language proficiency takes a significant period of time. In this comparative sample of first-generation immigrant youth who had been in school in the United States for nearly 7 years on average, only 7% had developed academic English skills comparable to their English-speaking peers of the same age. Three fourths of the sample demonstrated English language proficiency more than one standard deviation below the average for English-speaking peers. Substantial

variation was evident, however, in students' English language proficiency standard scores. These findings are consistent with previous research, which has generally found that students need at least 4 to 7 years to develop academic English skills comparable to their peers at school (Collier, 1987, 1995; Cummins, 2000; Hakuta et al., 2000).

Comparison of country of origin group means revealed that Chinese students had significantly higher English language proficiency than did other groups in the study. Examination of school quality variables indicates that the Chinese newcomers in this sample were less likely than other groups to attend the least optimal and most segregated schools. The Chinese families in our sample also tended to arrive in the United States with higher levels of education. We speculate that Chinese immigrant families arrived in the United States with a developed understanding of the uneven opportunities schools offer and were able to draw on resources in the Chinese immigrant community to pursue better educational opportunities (Li, Holloway, Bempechat, & Loh, in press; Suárez-Orozco et al., 2008). This finding underscores the importance of examining social context variables across groups to distinguish whether effects are attributable to social context rather than cultural difference (McLoyd & Steinberg, 1998).

### **Exposure to English in Informal Social Situations**

Using English in informal situations (e.g., at work, with friends, in the cafeterias and hallways of school, and in neighborhood contexts) was shown to affect students' academic English language proficiency; neither students' reported language use at home nor at school was as strongly related to English language proficiency. Those who had more opportunity to use English in informal settings demonstrated stronger English proficiency outcomes. Consistent with previous research, peers and community contexts represent important opportunities for English language learning (Gibbons, 1998; Jia & Aaronson, 2003). We hypothesize that schools—the primary site of socialization for most immigrant youth—provided youth with different socialization opportunities (Suárez-Orozco et al., 2008).

### **School Quality**

The schools newcomer immigrant youth in this sample attended were often less than optimal. Attending schools where high percentages of students lived in poverty and low percentages of students reached the proficient level in ELA (English Language Arts) had a strong negative relationship with English language proficiency. These findings parallel those of Orfield and Yun (1999), Valdés (2001), Olsen (1997), and others who have described the intense physical and linguistic segregation that many immigrant students encounter and the negative implications for student learning.

Hierarchical regression analysis revealed the critical interplay of the skills students bring with them and the linguistic and educational contexts in which they found themselves. The influence of the home environment

variables—parental language skills and mother’s education—on students’ English language proficiency decreased in explanatory power and significance when the school quality variable school ELA proficiency rate was introduced in the fourth model specification. This finding suggests that the effect of parental language skills and mother’s education on language learning outcomes may be mediated by school contexts. Results parallel the literature in suggesting that immigrant students encounter structural forces such as segregation and poverty at school that are more strongly related to student learning outcomes than are individual SES variables (Sirin, 2005).

### **The Role of Social Context in Explaining Language Learning**

Study findings support conceptualizing social context variables as sources of variation in second-language learning outcomes. In particular, students’ English language proficiency was influenced by age, time in the United States, maternal education, parental English skills, opportunity to speak in English in informal settings and at school, and school ELA proficiency rate. Regression analysis with these predictors explained nearly half (45%) of the variation in students’ English language proficiency.

Focusing on the experiences of our sample in several settings, hierarchical regression results showed that multiple levels of social context influenced students’ English language proficiency after 6.9 years in the United States on average. In keeping with previous research, these findings show that individual variables are important; the longer students had been in the United States, the higher their English language proficiency scores were likely to be. Also consistent with previous research, having mothers with higher levels of education and more advanced English skills was predictive of higher English language proficiency for students.

In addition to these individual and home environment factors, findings show the critical importance of using English in informal settings and at school, as well as of school context. The percentage of students in a school who reached the proficient level in ELA was a strong predictor of English language proficiency. In school environments where a greater proportion of students reached proficiency on the ELA exam, newcomer immigrant students had a substantially better environment to learn academic English. The less opportunity newcomer students had to interact with and through academic English (with their peers and teachers), the less likely they were to demonstrate strong proficiency in academic English.

### **Implications for Educators**

The immigrant groups in the current study have different immigration histories and divergent sociocultural backgrounds, and yet they demonstrate many similarities in their experience of language learning in the United States. Students with the most individual, home, informal social, and school resources were more likely to have caught up to their same-age English-speaking peers within 7 years in the United States on average. Further, these

data show that although students' individual resources contributed to second-language acquisition outcomes, social context factors played a fundamental role in how successful students were in learning academic English. These results point to the importance of identifying the peer, school, and community resources newcomer students may be able to utilize in advancing their academic English skills and facilitating engagement with the content of school. Teacher training should emphasize the role of social context factors in individual language learning outcomes. Focusing on the crucial role of social contexts in developing academic language reframes language learning in terms of ELLs' diverse experiences rather than solely attributing success and failure to individual strengths and deficiencies.

These results also suggest that regardless of a student's opportunities, learning academic English takes time. For second-language learners in the United States today, high-stakes tests have become "de facto language policy" (Menken, 2008). Many immigrant students are tested before their academic English proficiency has developed enough to demonstrate their skills and knowledge in oral and written assessments. Educators should consider the impact of early testing and tracking mechanisms for access to postsecondary education and for students' academic success and eventual social and economic mobility.

Finally, results from this study also suggest that theoretical models of language learning developed for young children do not capture the active role of adolescent immigrant students in constructing their own language environments. Educators and policy makers should be aware that research findings based on samples of younger children should not be uncritically applied to adolescents (Lightbown & Spada, 2006). Although there have been attempts to understand and address the needs of immigrant students at the elementary level, there has been a lamentable absence of efforts to do so for English language learners at the secondary school level (Faltis, 1999; Ruiz-de-Velasco & Fix, 2000). A continued focus on adolescent immigrant students and how they can achieve academic success while learning English is needed. Future research should examine the social processes of schooling that facilitate English language learning for immigrant students.

### **Future Directions**

The current sample is a product of the specific inclusion criteria of the LISA study. Given the results of descriptive statistics, we are confident that this sample is representative of recently arrived immigrant youth, but this was not a random sample and thus limits our ability to generalize from our sample. Additionally, it is important to interpret regression results with caution as school contexts were not evenly distributed within the sample. Future research should equate sampling groups by school context as much as possible given the reality that newcomer immigrant students from different countries of origin attend different schools.

The current study also used school report data that were collected from school districts and therefore were subject to reporting biases of district data; thus results should be interpreted with caution. Nonetheless, this study points



to additional directions for future research. The schools youth attend are sources of and explanations for differences in English language proficiency and in language learning. Further research is needed to investigate more closely the effects of variation in school factors on language learning such as were found between groups of Chinese, Haitian Creole, and Spanish-speaking students. Large sample size could facilitate the development of hierarchical linear models which could better account for variation within and between schools.

These findings indicate that social context factors are associated with adolescent English language learning. Further research which describes and measures the impact of these dynamic social processes is needed to establish models and practices appropriate for adolescent language learners. Mixed-methods approaches which combine quantitative and longitudinal data with attention to individual trajectories through qualitative data are necessary to fully explore the associations between social context factors and second language learning processes.

Notes

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<sup>1</sup>The standardized achievements tests used in this model included the Broad Reading and Broad Math achievement tests of the Woodcock Johnson test of achievement (Woodcock, McGrew, & Mather, 2001).

<sup>2</sup>The following table lists the characteristics of students by country of origin in the 5th year of the study:

	Total Sample	China (n = 72)	Haiti (n = 50)	Dominican Republic (n = 60)	Central America (n = 57)	Mexico (n = 70)
Gender—female (%)	56.5	63.2	53.2	63.0	58.8	46.9
Two-parent home (%)***	67.6	82.1	57.8	39.6	74.0	76.6
High school graduate mother (%)***	33.3	51.6	7.3	48.1	20.0	28.1
Working father (%)***	64.4	84.4	66.7	39.6	72.0	64.1

Note. N = 309. For categorical variables, we report the percentage and establish significance with chi-square next to the variable name.

\*p < .05. \*\*p < .01. \*\*\*p < .001.

<sup>3</sup>More than three fourths of the 407 students interviewed in the first year of the study also participated in the fifth interview wave (n = 309). We assessed the significance of differences at baseline between those who completed the study and those who started in the study but dropped out to determine if they had any specific characteristics that might affect outcomes or might lead us to misinterpret our findings (such as would have been the case if the lowest performing students in the beginning of the study dropped out of the study

at greater rates than did students who began the study as high performers). We examined differences in more than 40 constructs, including grades Year 1, sociodemographic and family characteristics, experience with migration, schooling, mental health, language barriers, and social supports, among others. Statistical differences were examined using chi-square measures of association (for categorical variables) and *t* tests (for continuous variables) for both student and parent interviews. We found only a few significant differences: Students of Chinese origin had higher completion rates (90%) than did Dominicans, Mexicans, or Central Americans (approximately 75%) or Haitians (69%); more girls than boys completed the five interviews (81% vs. 70%); and noncompleters were attending the most highly “toxic” schools as measured by reports of having witnessed violence (37% vs. 23%). In all other respects, the students who began the study were nearly identical to those who completed the study.

<sup>4</sup>In our sample, age at arrival and time in the United States are confounded by design ( $r = -.57, p < .001$ ), wherein the younger the students were when they arrived in the United States, the longer they had been here by the 5th year of the study.

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