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Undermatched? School-based Linguistic Status, College Going, and the Immigrant Advantage

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Abstract

Considerable research investigates the immigrant advantage, yet little work examines the influence of school-based linguistic status. Contradictory patterns exist: research identifies both an immigrant advantage and a language minority disadvantage in college going. Although not all immigrant youth are language minorities, many do speak a language other than English. Educators in U.S. schools group immigrant students into three discrete linguistic categories: native English speakers, language minorities not in ESL, and English learner (EL) students. We employ multivariate methods to investigate immigrant college going by linguistic status using the *Educational Longitudinal Study of 2002*. Results suggest an immigrant advantage *only* among the two immigrant groups not in ESL, and evidence of *undermatching*—wherein students choose post-secondary options for which they are over prepared—among high achieving EL students. Expanded understanding of the immigrant advantage might improve EL students' pathways into college, stemming this loss of human capital.

Enrollment and participation in higher education have become increasingly important for successful involvement in the U.S. workforce. Net of all else, the children of foreign-born parents, both first- and second-generation immigrant youth, are more likely to graduate from high school and enroll in college than their third-plus generation peers (Glick & White, 2004). At the same time, however, language minorityⁱ youth, the majority of whom are children of immigrants, participate in higher education at a lower rate than native English speakers (Fry, 2002; Kaufman et al. 1998). In addition, when language minority youth do enroll, it is primarily in two-year, rather than four-year institutions (Desmond & Turley, 2009; Turley, 2009). Over 20% of K-12 students are language minorities, noted as a special status group in U.S. schools—flagged for linguistic assessment and identification upon enrollment (Abedi, 2008; Mahoney & MacSwan, 2005), as well as possible placement in linguistic support services.

Within the language minority population, those students who experience school-based identification with English learner (ELⁱⁱ) status and subsequent placement in English as a

ⁱThe term *language minority* refers to *all* students in this U.S. schools-based sample who speak a language other than English at home.

ⁱⁱEnglish learner (EL) students are those language minority youth placed in English as a second language (ESL) linguistic support services.

second language (ESL) services demonstrate significantly lower academic outcomes (Callahan, Wilkinson, & Muller, 2010; Callahan, Wilkinson, Muller, & Frisco, 2009; Fry, 2008; Umansky, 2014). As immigrant and language minority youth comprise two rapidly growing—and not unrelated—populations, a more thorough understanding of their educational experiences (Pew Hispanic Center, 2009) may improve college enrollment in general. The present study is designed to investigate the immigrant advantage, specifically whether and how it may vary by school-based linguistic status.

Immigrant Students, Linguistic Status, and Academic Preparation

To frame our inquiry, we first draw upon Kao and Tienda's (1995) theory of immigrant optimism. In their seminal study, Kao and Tienda found that children of foreign-born parents achieve at levels above and beyond what might be expected given their sociodemographic characteristics, context, and experiences. The authors hypothesized that immigrant youths' apparent academic advantage may be due in part to their parents' optimism for their future (Kao & Tienda, 1995), a pattern that holds even in the elementary grades (Raleigh & Kao, 2010). Evidence of an immigrant advantage has held across numerous studies and educational contexts (Crosnoe & Turley, 2011; Kao, 2004). More recently, researchers have begun to interrogate the nuances that comprise this advantage, highlighting the importance of social networks, local context, and other factors (García-Coll & Marks, 2011; C. Suárez-Orozco et al., 2009). Language in particular comes into play as research in this area examines how bilingualism and biculturalism relate to educational outcomes (Feliciano, 2001; Golash-Boza, 2005; Santibañez & Zarate, 2014). However, research focused solely on immigrants' primary language maintenance and development risks overlooking school-based linguistic status as an educational marker.

Consideration of immigrant and linguistic status simultaneously adds complexity to any empirical inquiry; although not all children of immigrants are language minorities, most young language minorities *are* children of immigrant parents (Gershberg et al. 2006), especially those identified by the school as in need of linguistic support services. It is this particular intersection that draws our interest; while research touts the advantages of bilingualism (see above), one subset of immigrant bilinguals, EL students, experiences a significant academic disadvantage (Fry, 2007; Rumberger & Tran, 2010). Integrating language, specifically school-based linguistic status, into the immigrant achievement literature has the potential to expand our understanding of the immigrant advantage, informing researchers and practitioners of its implications.

In the present study, we examine distinctions within the immigrant population by using school-based linguistic status to distinguish students not only by native language, but also ESL placement. Failure to address students' linguistic *and* immigrant status simultaneously minimizes the importance of the educational contexts in which these youth come of age socially and academically. Grace Kao and others argue that immigrant parents' relatively high expectations bolster their children's achievement (Glick & White, 2003; Kao & Tienda, 1995; Ferreira, Harris, & Dohoon, 2006; Raleigh & Kao, 2010; Rosenbaum & Rochford, 2008; C. Suárez-Orozco, 2004; White & Glick, 2009), especially when the youth maintain ties to their parents' linguistic and cultural communities of origin (Bankston & Zhou, 1995;

Feliciano, 2001). However, despite attention to national origin and generational status, as well as race, ethnicity, gender, and social class, most immigrant research fails to consider school-based linguistic markers (See, for example: Kao, 2004; Portes & Hao, 2004; Portes & Rumbaut, 2006; White & Glick, 2009). Likewise, most language minority and EL education research addresses students' linguistic, but not immigrant status (See, for example: Abedi, 2008; Coleman & Goldenberg, 2009; Genesee, et al., 2006; Hopkins, et al. 2013). We argue that it is critical to address linguistic *and* immigrant status together to understand immigrant achievement.

Academic Achievement and the Immigrant Advantage

Much has been made about the beneficial effects of the high expectations foreign-born parents hold for their children (Kao, 2004; Kao & Tienda, 1995; Raleigh & Kao, 2010), as well as the obligations immigrant youth often feel to perform well academically given their parents' sacrifices (Hao & Bonstead-Bruns, 1998). Gibson's (1987) early ethnographic work theorizing accommodation without assimilation demonstrates how immigrant parents' expectations shape their children's ability to succeed in the face of adversity. Some research focuses on the primary language and ties to the immigrant community (Bankston & Zhou, 1995; Fuller & Hannum, 2002; Golash-Boza, 2005), while other work emphasizes psychological well-being (Kao, 1999; C. Suárez-Orozco & Suárez-Orozco, 2001) and social capital (Kao & Rutherford, 2007; Pong et al., 2005). Regardless of the core motivation, research investigating immigrant achievement (Baum & Flores, 2011; García-Coll & Marks, 2011; C. Suárez-Orozco, et al., 2009) clearly finds that factors above and beyond race, ethnicity, home language, and social class are at play.

Immigrant students' identity is key to understanding their achievement; their ability to 'bridge,' or draw from both familial and dominant culture resources simultaneously, has been found to facilitate positive academic outcomes (Altschul, Oyserman, & Bybee, 2008; Callahan & Obenchain, 2013; Feliciano, 2001). In fact, the ability to negotiate multiple languages and cultures supports the concept of selective acculturation, a core tenet of segmented assimilation theory (Portes et al., 2009; Portes & Hao, 2002; Zhou, 1997). However, those immigrant youth whose identities are most closely connected to the home language and culture may also require linguistic support, adding a layer of complexity to their schooling. Careful consideration of the unique positioning of immigrant EL students in and by the school system once the need for linguistic services has been established is necessary to understand the immigrant advantage.

School-based Linguistic Status and Immigrant English Learner (EL) Achievement

From the perspective of teachers and administrators, national origin carries relatively little weight in determining a student's academic program. What does merit attention however, is the student's assessed English ability. Since the federal *Lau v. Nichols* (1974) Supreme Court decision, educators and schools have been mandated to identify those language minority students who require linguistic support services in order to access core academic content in English (Hakuta, 2011). When a student first enrolls in a school, the parents fill out a *home language survey*, which indicates whether or not a language other than English is spoken in the home; this information allows the school to identify which students are non-native

English speakers, or language minorities (Abedi, 2008). Educators assess the English proficiency of all language minority students upon entry to determine which students will require linguistic support; these students are subsequently labeled 'English learners' (EL students). Identification then triggers the provision of specific services, placing the student in a special category in the eyes of the school, eligible for, if not required to receive, linguistic support services (Hakuta, 2011; Thompson, 2013). School-based linguistic status triggers a myriad of programmatic and placement decisions that may influence students' trajectories (Gándara, 2010; Okhremtchouk, 2014). Ultimately, schools must balance the legal requirement to provide these services with the practical implementation of an academically rich educational experience.

EL students' access to linguistic support services becomes even more complicated in high school, where course placement is constrained by graduation requirements and preparation for college (Schiller & Muller, 2003), and EL students themselves demonstrate multiple, varying academic and linguistic needs (Olsen, 2010). High school ESL classes enroll language minority students who have been in US schools since kindergarten yet, for whatever reason have not yet achieved exit from EL status alongside immigrant students who arrived last week—some of whom completed Calculus in the home country, and others who experienced intermittent schooling at best (Freeman et al., 2002). The considerable diversity of educational, linguistic, and social needs among adolescent EL students emerges just as the linguistic support services narrow. Currently, elementary EL programs draw from a relatively rich array of options; yet, 40 years after Lau, ESL coursework remains the most common secondary EL program (Zehler, et al., 2003), with little, if any variation.

Linguistic support services come at a price; scholars argue that secondary schools, inadvertently or not, segregate EL students academically and socially from their more English proficient peers (Valdés, 2004). In fact, researchers have described the secondary EL learning environment as academically and socially peripheral, both marginalized and marginalizing (Ek, 2009; Harklau, 1999; Katz, 1999; Valenzuela, 1999). In her work theorizing equitable EL education, Thompson (2013) explores the ramifications of separating EL youth for linguistic support services. Likewise, Umansky (2014), Hopkins et al. (2013), and others have pointed to the academic limits placed on EL students when their linguistic needs are granted precedence over their standing as content-area learners (Callahan et al., 2009, 2010). The struggle facing immigrant EL education lies in the provision of rich academic instruction alongside linguistic support services to allow the student to master both the language and the content.

Due to the complications inherent in the provision of linguistic supports, EL youth may be particularly susceptible to academic and linguistic segregation across and within schools (Fix & Passel, 2003; Gándara, 2010; Katz, 1999). In turn, academic segregation may be exacerbated by placement in less than rigorous ESL programs (Ek, 2009; Harklau, 1994; M.M. Suárez-Orozco, et al. 2008; Valdés, 2001), within which preparation for college may or may not occur. Academic and social segregation becomes especially problematic at the secondary level, after EL students have acquired a cumulative academic disadvantage (Callahan, 2005) due to repeated placement in EL-focused courses that, inadvertently or not, cover less material, at a slower pace, in a misguided attempt to accommodate EL students'

linguistic needs. The relationship between school-based linguistic status and the immigrant advantage warrants consideration.

EL students present a unique interpretation of the immigrant advantage; the vast majority are children of foreign-born parents, either first- or second-generation themselves. As such, their educational experiences are influenced by not only the political rhetoric surrounding immigrants and immigration (Gándara & Rumberger, 2009; Wiley & Wright, 2004), but also educational systems' pedagogical responses to that rhetoric, arguably reflected in the positioning of ESL programs. Not only do EL students experience segregated content area courses (Dabach, 2014), but they are also frequently placed with teachers who have received little training to meet their academic and linguistic needs (Gándara et al., 2005; 2003; Menken & Antuñez, 2001). These marginalizing factors suggest that understanding the immigrant advantage requires identifying how it works among EL students in particular.

College Going: One Measure of Immigrant Achievement

Among immigrant and language minority youth, college going is associated not only with individual sociodemographic and academic characteristics, but also the ability to use the English language to acquire and produce new knowledge (Bailey & Weininger, 2002; Rodriguez & Cruz, 2009), suggesting that language and linguistic status merit serious consideration. However, linguistic background and race/ethnicity are likely not the only factors at play (Hossler et al. 1999; Perna, 2000); academic experiences and exposure also matter. Prior qualitative research suggests that immigrant adolescents appear particularly responsive to both school processes and the school context as they enter adulthood (Antrop-González & De Jesús, 2006; Jaffe-Walter & Lee, 2011). Specifically, research has found that the school-based supports immigrant youth experience during high school are powerful in shaping their future trajectories (Antrop-González, Vélez, & Garrett, 2008; Bartlett & García, 2011; Michael, Andrade, & Bartlett, 2007). This study will examine how school and educational experiences may function for immigrant and language minority youth when holding constant traditional predictors of college going, such as parental education and income (Gottlieb, 1962; McDonough, 1997). We hypothesize that linguistic status may contribute to school-based stratification, which in turn can influence whether or not a given immigrant student experiences an advantage in college going.

Understanding the intersection of linguistic status with students' educational experiences is critically important in the current context. Over the past half-century, the role of social class in predicting college going has decreased (Baker & Velez, 1996) in importance, while that of academic course taking and grades has increased (Schneider et al. 1998). Prior research has shown high school math course taking to be highly associated with post-secondary preparation and subsequent opportunities for college enrollment (Adelman, 2006), especially at the advanced levels (Trusty & Niles, 2003). However, research also finds that enrollment in and advancement through the math sequence is associated with not only race, ethnicity and linguistic status (Mosqueda, 2010; Muller et al., 2010), but also ESL placement (Callahan et al., 2009; 2010). In fact, the content area supports EL students receive may be particularly salient to their achievement (Moschkovich, 2007, 2012). Together these factors

suggest that school-based linguistic status may shape certain immigrant students' achievement.

Undermatching: Who Goes to College and Where

Not only does educational stratification challenge students' college-going processes, but racial/ethnic and linguistic minority—and immigrant—youth in particular also appear to limit their economic and professional potential when they *undermatch* (Smith et al., 2013) and opt out of the post-secondary options for which they have prepared. Bowen, Chingos, and McPherson (2009) describe undermatching as the greater than expected likelihood of academically qualified minority and economically disadvantaged youth to apply to, enroll in, and attend less selective four-year colleges than their comparably prepared, higher SES, non-minority peers. Academically qualified minority youth are more likely to enroll in two-year, rather than four-year, institutions than their majority group peers (Handel, 2014; Hoxby & Turner, 2013). Undermatching is most common among low SES students whose parents did not complete college (Smith, et al., 2013), as is the case for many immigrant youth. The tendency to underestimate the availability of financial aid and other supports is also a central motivator of undermatching (Handel, 2014). Limited information about financial aid and relatively low levels of parental education characterize the context and experiences of many immigrant language minority youth whose parents are relatively new to the U.S. education system.

Social class is highly associated with the mismatch between students' educational aspirations and the academic plans they actually carry out (Hanson, 1994). Income is certainly a key factor; the vast majority of high achieving, low-income students fail to apply to a single competitive four-year college, despite their academic qualifications (Hoxby & Turner, 2013). Using the Chicago Public Schools data, inclusive of a high proportion of low-income students, Roderick, Coca, and Nagaoka (2011) found that a full third of high school graduates who both aspired to, and were qualified to attend selective four-year institutions did not; 13 percent ultimately chose a two-year college, and 20 percent never enrolled. Perhaps more importantly, the authors found that Latino and immigrant students were less likely to complete the steps required for enrollment in a four-year college than non-immigrant, non-Latinos, all else held equal. Prior research examining the prevalence of two-year college going among Latinos (Kurlaender, 2006) attributes some, but not all, of the two-year preference to familism (Desmond & Turley, 2009) and limited access to constructive social capital (González et al., 2003). Many of the issues that drive undermatching are not only tied to race, national origin, or income, but may also reflect how school systems interpret these factors along with linguistic status to perpetuate existing patterns of academic stratification.

Given the discrepancies between immigrant EL achievement patterns and what we know about the immigrant advantage, we hypothesize that school-based linguistic status may not only be associated with some of the seemingly contradictory patterns evidenced in immigrant language minority college enrollment, but also the undermatching phenomenon. Our inquiry addresses this key juncture—how, if at all, might EL status moderate an immigrant youth's likelihood of enrolling in either two- or four-year college. Specifically,

the present study investigates the relationship between immigrant linguistic status, math course taking, and college going net of critical individual and contextual characteristics.

Purpose

We designed the present study to build upon immigrant optimism theory (Kao & Tienda, 1995; Raleigh & Kao, 2010) by investigating several linguistic and academic factors that may also shape immigrant youths' college going. To examine variation in college going, we developed models to investigate the intersection of linguistic *and* immigrant status while taking racial and ethnic background, social class, course placement, and academic performance into account. We designed our models to investigate the following research questions:

1. How does school based linguistic status relate to students' college going patterns by nativity (e.g., immigrant status)?
2. In particular, does school based linguistic status influence the relationship between math course taking and two- and four-year college going across student groups?

As the educational processes of children of immigrant and native-born parents differ on a number of levels, their college going processes may vary as well. Specifically, we examine whether and how the intersection between linguistic status and academic experiences may speak to the undermatching phenomenon. The academic experiences of the growing immigrant language minority population increasingly shape the future of the nation. Understanding college going via immigrant *and* linguistic status simultaneously carries potential implications for both higher educational policy and secondary school practices.

Data and Methods

Data and Sample

For our analyses, we use data from the 2002 Education Longitudinal Study (ELS: 2002). The *ELS* provides a representative sample of sophomores in U.S. high schools in the 2001-2002 academic school year (n = approximately 15,000 students nested in 750 schoolsⁱⁱⁱ). The ELS data include information from a base year survey in 2002, a follow-up survey in 2004 when most students were in their senior year of high school, high school transcript information, and a second follow-up in 2006, two years after high school. Similarly, ELS student data are supplemented with parent, administrator, and teacher surveys. The high school transcript data contained in ELS allows for consideration of students' course taking patterns and detailed measures of academic achievement. Our analytic sample includes all students surveyed in both the base year (2002) and second follow-up (2006) with valid transcript weights (n =13,830); we exclude students missing on either the dependent variable (college going: n =1,470) or native language (n =490), as well as those who did not complete either a high school diploma or a GED by the survey date (n =130). Ultimately, inclusion of the various filters results in an analytic sample of approximately 11,740 students in 745 schools.

ⁱⁱⁱPer NCES restricted use data requirements we report unweighted sample sizes to the nearest 10 and report weighted means and proportions.

Dependent Variable

College going—Our measure of college going comes from an ELS 2006, second follow-up survey item that asks the student to report the highest level of education attempted to that point. We created a multinomial outcome variable which codes students who did not enroll in college to 0; those who enrolled in a two-year college to 1; and four-year enrollees to 2.

Key Independent Variables

Immigrant status—We use student and parental nativity to create a measure of immigrant status, i.e., whether or not a student is foreign-born (first-generation) or the child of one or more foreign-born parents (second-generation), to address the unique school experiences of children of immigrants in the U.S. For analytic purposes, we combine first-and second-generation and use the term ‘immigrant’ to refer to all children of immigrant parents from this point on.

Language minority status—We first identify a student as language minority based on her response to the question: “Is English your native language (the first language you learned to speak when you were a child)?” From this question, we created an indicator variable (language minority) on which we assigned students whose native language is not English a value of 1.

EL student status—Within the language minority population, certain students are identified for linguistic support services and placed in ESL programs (Abedi, 2008). We are especially interested in the college going of immigrant language minorities who experience high school ESL placement, identified by their schools as *EL students*^{iv}. We determine *EL status* using course taking variables from high school transcripts, as well as a school report indicating whether a student was ever in a high school ESL program. Exploratory analyses indicate that the school report alone is insufficient to determine ESL placement; many respondents not flagged by the school report show ESL coursework on their transcripts. We identify ESL coursework as classes designed to meet EL students’ linguistic needs, either via discrete, language-based ESL instruction or modified academic content area coursework; these courses were taken by 93% and 40% of EL students respectively. Due to the considerable overlap in enrollment and the relatively small numbers in each category, we combine these two groups for analytic purposes.

Analytic Sample

We disaggregate our analytic sample by both immigrant *and* linguistic status, resulting in four distinct categories: 1) third-plus generation students (n=8,760), and three immigrant groups: 2) native English speakers (n=1,320), 3) language minorities not in ESL (n=1,370), and 4) EL students (n=290). Among the first generation, 23% reported speaking only English, 20% were in ESL, and 57% were language minorities not in ESL; among the second generation, these categories were 55%, 7%, and 38% respectively. In addition, just

^{iv} Variables in the ELS: 2002 dataset allow the researcher to determine whether or not a given immigrant language minority student was placed in ESL coursework during her high school career. Unfortunately, the ELS: 2002 data does not include measures which would allow one to determine when or how an EL student was first identified for placement in linguistic support services, nor does information exist to determine when a student exited EL classification.

over 1% (n=150) of the sample self-reported as third-plus generation who spoke a language other than English; supplemental analyses with and without these students in the reference group were substantively identical. As a result, these students are included in the third-plus generation, native English speaker group.

A note on language and labels—In attempting to disentangle school-based factors from immigrant status, we were careful in our word choice (García, 2009; García et al., 2008). Our terminology reflects the desire to find balance between the school-based label, represented by ESL placement, and the demographic mechanisms that research suggests are important (being children of foreign-born parents and language minorities). Our choice of labels for these four groups is thus an approximation of the immigrant achievement literature, balanced with schools' need to distinguish among language minorities by their identification for special services, a process which considers how schools construct educational experiences.

We acknowledge that language minority students certainly exist in the ELS sample who were EL-identified during high school, but for whatever reason did not enroll in any type of ESL coursework. However, our purpose is to address the educational experiences of the students who receive linguistic support services. Thus, we identify EL students as those immigrant language minority youth placed in ESL coursework. We attempt to explain our choices as clearly as possible, the presence of the school-based linguistic label (Thompson, 2013) at the core of our inquiry. We designed this study to contribute to both empirical and practical efforts to help schools capitalize on the potential of the immigrant advantage, to improve achievement regardless of linguistic status.

Additional Independent Variables

Sociodemographic background—Our analytic models include several measures of student and family background from the base year student survey. Drawing from prior research on U.S. adolescents' racialized school experiences, student controls include self-reported gender, race/ethnicity, and age in 10th grade. Race/ethnicity is measured with a series of dummy variables for Latino, black, Asian, and other (including students who report more than one race), with the reference group set to white. Given the prevalence of Latinos and Asians as both language minority and EL-identified students, we hold race/ethnicity constant in all analyses. To address social class, we include two variables measuring socioeconomic background: parental education and family income. An ordinal variable, parental education reflects the highest level of schooling completed by either of the student's parents, and ranges from 0 (less than high school) to 5 (Ph.D./ Professional Degree). We include a categorical indicator of family income in the 10th grade (13 categories ranging from “no income” to “more than \$200,000”). In all analyses, we treat these variables as continuous and include them as single measures (range: 0 to 5, parental education; range: 1-13, family income). Analyses where these control variables were treated as a series of dummy indicators produced substantively similar results; however because there were so many categories, we were concerned about statistical power and chose to treat them as continuous indicators. In addition, to address the relationship between family stability and

academic achievement (Amato, 2005), we include a measure of family structure: whether a student lives with both parents.

Among immigrant youth, we include a control for recency of arrival, flagging foreign-born, first-generation immigrant youth who arrived within the previous five years. Secondary EL scholars suggest that among recent immigrants, two distinct trends emerge; they are either the least prepared and least English proficient, or alternately, among the most academically well-prepared and highly schooled, requiring minimal support to move into mainstream college preparatory coursework (Freeman, et al., 2002; Ruiz-de-Velasco & Fix, 2000; Short, 2002). The recent arrival flag is designed to take these considerations into account.

Academic characteristics—We include several measures of high school achievement and preparation, from 10th grade standardized test scores, to academic GPA, and course taking. We use reading test scores to provide a measure of English proficiency comparable across all student groups^v, language minorities and native English speakers alike. We include math test scores as well as academic GPA, a cumulative measure of grades from all content area coursework derived from high school transcripts, as measures of overall achievement.

Not only is high school course taking highly stratified (Gamoran, 2010; Muller, et al., 2010), but math course taking in particular functions as a gate keeper to higher education (Adelman, 2006; Schneider et al. 1998). As such, we include three dummy variables to indicate the highest math course taken by the student while in high school. Students completing (1) *Algebra II*, or (2) a *College Preparatory* math course higher than Algebra II (e.g., Pre-Calculus or Calculus), were compared to the reference group, (3) students who completed *Basic Math* (e.g., Algebra I or Geometry). In addition, models include a dichotomous indicator measuring whether the student took Chemistry or a more advanced science prior to graduation.

School controls—All final models include controls for the characteristics of the school the student attends. These variables include region (south, west or Midwest, reference: northeast), school sector (public=0, reference: private and Catholic). As measures of school economic and linguistic composition, we include percentage receiving free and reduced lunch (range: 0%-96.2%), and LEP(EL)-identified (range: 0%-61%). While the vast majority of schools enroll less than 1% EL students, the overall mean EL/LEP enrollment is 4.4%, suggesting a highly bifurcated distribution^{vi}. All final models include school controls, however, in the interest of space, we do not show these coefficients (full tables are available upon request).

^vAlthough ELS offers an indicator of English proficiency (i.e. how well the student reads, writes, listens to and speaks in English), the survey item was asked *only of* students who responded that English is *not* their native language, and no comparable measure exists for the native English speakers. In exploratory analyses, we included a version of the variable (we set all native English speakers to the highest English proficiency value); however the variable was only significant at the baseline, losing its effect with the inclusion of background variables. Given the tenuous nature of this variable and its null effect, we do not include it in the final models.

^{vi}We attempted to include percent minority as an additional relevant control, however it was so highly correlated with percent free and reduced lunch as to preclude its inclusion in our models.

Analytic Plan

Our theoretical framework suggests that among other factors, immigrant and linguistic status may influence two- and four-year college going. To begin, we examine baseline differences across the four immigrant linguistic groups using a Bonferroni post-hoc test, which allows us to minimize the probability of Type I errors. We then employ multinomial logistic regression models to predict three mutually exclusive categories of post-secondary enrollment: no college, two-year, or four-year. Models examine first two- and four-year college going (compared to none), and then four-year compared to two-year college going for our full analytic sample. We use a series of nested models to explore the association of immigrant and linguistic status on college going, net of background, academic experiences, and school context. Final models interact math course taking with immigrant linguistic status. Preliminary analyses tested several different mechanisms both associated with college going, and hypothesized to vary by immigrant linguistic status. Of these mechanisms, math course taking clearly stood out.

Before running our analyses, we corrected for missing values in the data using multiple imputation in Stata by creating five imputed datasets and averaging the results across these datasets for final estimates. The imputation equations included all analytic variables present in the models shown in Table 2, as well as several additional variables associated with college going (whether the student liked school; student's 10th grade college enrollment and graduation expectations; parent's college enrollment and graduation expectations for the student; school percent minority). All analyses presented here, including descriptive statistics, are run using these multiply imputed data. However, neither the dependent variable (college going), nor immigrant linguistic status is imputed (despite being used as indicators in the imputation equation for independent variables); students missing on either of these key analytic measures are dropped from the sample after imputation. Most imputed independent variables were missing less than nine percent; however, the “new immigrant” variable had the greatest percent missing at 17.5 percent. All analyses include a transcript weight. Because the ELS sampling design selected schools first, and then students within these schools, we use the svy command in Stata with school ID as a cluster indicator, and the transcript weight as a sampling weight.

Results

As we investigate college going, it is important to keep in mind that key academic and demographic differences exist along immigrant, linguistic lines. Table 1 displays the means and proportions of our analytic sample by immigrant linguistic status, indicating any significant differences across the four groups. In contrast to the traditional single reference group format, we include cross group comparisons to show not only how immigrants differ from the third-plus generation (a), but also variation among immigrants (b). Additionally, we show how EL students differ from non-ELs (c), and how language minorities compare to native English speakers (d). We first call the reader's attention to the dependent variable, college going; language minorities are significantly more likely to enroll in two-year colleges than native English speakers, and EL students are significantly less likely to go to a

four-year college, or to ever enroll than non-EL youth. In fact, significant differences in four-year college going exist across all four groups.

Background characteristics vary as well; EL students are more likely to be Latino or Asian, recent immigrants, and come from low-income homes than non-EL students. As noted earlier, although the EL student population is comprised entirely of immigrant youth, 44% of immigrant students report English as the first or primary language spoken in their home. In addition, students' academic performance and experiences (math and reading test scores, grades or GPA, math and science placement) differ significantly, with EL students trailing behind all three other groups. Significantly more EL students (37%) leave high school without completing Algebra II, noteworthy as it is not only a traditional indicator of preparation for college, but also an increasingly common graduation requirement (Teitelbaum, 2003).

The characteristics of the high schools students attend differ by student immigrant and linguistic status as well. Most notably, the percent LEP varied significantly across all groups, as did school economic composition, speaking to the linguistic and economic segregation of U.S. high schools (Orfield & Lee, 2005). Taking school-level segregation (Fry, 2008; Gándara, 2010; Van Hook & Balistreri, 2002) into account contextualizes immigrant youth achievement.

These descriptive results suggest group-specific patterns of post-secondary preparation and involvement. The patterns of native English speaking immigrants most closely mirror those of the third-plus generation, with several key factors distinguishing between the two language minority groups as well. Our results suggest that these patterns may be related not only to social class, but also academic stratification; EL students in particular demonstrate considerably lower levels of academic preparation (course taking) and performance (GPA) during high school. While social class may not be easily altered, academic and school characteristics are relatively malleable for educators and researchers hoping to improve students' academic experiences.

The following section presents results from inferential models that hold constant family income, English reading test scores, and other important covariates of both immigrant status and college going. The inclusion of salient controls allows us to better isolate the relationship between course taking and college going by both immigrant and linguistic status. Clearly, the terms *immigrant* and *language minority* are not equivalent; however, they are often treated as such in popular discourse.

Predicting College Going: Linguistic Status, Sociodemographics, and Math Course Taking

Given the considerable variation in college going by immigrant linguistic status, we proceed to our inferential analyses. Table 2 shows the coefficients associated with two- and four-year college going (compared to none), and four-year compared to two-year college going for the full analytic sample. Model 1 illustrates the relationship between college-going and immigrant linguistic group (native English, LM no ESL, and EL student) relative to third-plus generation students, with background characteristics taken into account. We include academic experiences in Model 2, and then examine how the interaction between linguistic

status and math placement shapes college going, while including school level controls (coefficients not shown) in Model 3. We include interaction terms in Model 3 to address research investigating the post-secondary gate-keeping function of high school math coursework (Adelman, 2006), as well as its stratified nature (Catsambis, 1994; Kelly, 2009; Mosqueda, 2010; Riegle-Crumb, 2006). Math course taking serves a dual purpose, capturing not only students' preparation for college, but also their stratification during high school.

Choosing a two-year college over none—The first three rows of the far-left panel of Table 2 show the coefficients for the three immigrant groups. Those in the first two rows provide evidence to support an immigrant advantage in two-year college going among immigrant youth not placed in ESL, who are 79% more likely to enroll in a two-year school (over none) compared to their third-plus generation peers, even with all Model 2's academic controls (odds ratio of $1.79 = \exp[0.581]$). In the third row, an immigrant advantage emerges for EL students once academic characteristics are taken into account, as they are 69% more likely than the reference group to enroll in two-year institutions. Yet this relationship quickly disappears with the interaction of math course taking and immigrant linguistic status. These coefficients document partiality for two-year college going among immigrant youth, a preference that emerges once we account for background and academic characteristics. In fact, in the third and final models, the reader will note that the interaction between college preparatory math course taking and ESL placement (EL status) is both positive and significant. This coefficient suggests that college preparatory math course taking is significantly associated with two-year college enrollment among EL students in ways that it is not for the other groups, both immigrant and native-born.

Choosing a four-year college over none—The middle panel of Table 2 again shows evidence of an immigrant advantage in college going (this time four-year) among the two immigrant groups not placed in ESL, relative to their third-plus generation peers. Immigrant native English speakers and language minority students not in ESL are 55% and 47% more likely, respectively, to enroll in a four-year school compared to their third-plus generation counterparts when controlling on academic factors (Model 2). No evidence emerges to support an immigrant advantage for youth placed in ESL during high school. However, the reader will also note that most students' post-secondary decisions are also stratified, with the greatest tensions experienced by the academically prepared, who must choose *between* enrollment in a two- or a four-year institution.

Among college-goers: Choosing four-year over two-year—In the far-right panel of Table 2, we present the coefficients associated with choosing a four-year college relative to a two-year. Here, we find no evidence of an immigrant advantage, suggesting that the college going advantage is largely limited to two-year enrollment. Although in Model 1 EL students are 50% less likely ($.50 = 1 - \exp[-.685]$) to enroll in a four-year over a two-year school compared to third-generation students, this initial EL disadvantage is rendered statistically insignificant with the inclusion of academic characteristics. However, it is interesting to note that in Model 3, a significant, but this time *negative*, relationship emerges in the interaction between college preparatory math and EL status.

The emergence of this particular (negative, significant) interaction suggests that immigrant EL students, for whatever reason, do not experience the same supportive boost from college preparatory math as third-plus generation students. In addition, when we set the reference in our models to “immigrant EL”, the results indicate that EL students experience significantly less benefit from college preparatory math course taking on four-year college going than the other two immigrant groups as well. Here, we are able to observe how immigrant EL students, identified by their school-based linguistic status, fail to experience the same returns to college preparatory coursework as other immigrants. Ultimately, immigrant EL students who complete Calculus or Pre-calculus go to community college, despite having completed key coursework that should, in theory, make them four-year eligible. While we do not include final grades for these courses, models do hold constant students’ overall academic GPA.

Course Taking and Linguistic Status: Mediating the Immigrant Advantage?

The between-group differences in four-year college going are insignificant for students completing Algebra II or less, suggesting the bulk of variation in the math course taking mechanism occurs among the most highly qualified students, those who complete Pre-calculus or Calculus. Among students who completed either basic math or Algebra II, the relationship between course taking and college going does not vary by immigrant linguistic status. As might be expected, these students will be more likely to enroll in a two-year than a four-year institution. Results for both these math categories reinforce conventional wisdom regarding the relationship between educational preparation and college going. However, the results for college preparatory math are more nuanced in general, and arguably counterintuitive for immigrant EL students.

It is only among those students who completed college preparatory math that we note significant variation in the math mechanism across the four groups. In particular, the relationship with college going differs substantively and significantly for immigrant EL youth relative to all others. If we are to gauge college readiness by completion of Pre-calculus or Calculus (Adelman, 2006), we are left to ask whether this accomplishment benefits all students equally. In order to address the complexity of these particular results, we provide visual clarification in the form of Figure 1, which shows the predicted probabilities of two- and four-year college going across the four student groups, all else held at the mean, among students who completed advanced math.

Figure 1 shows a clear and statistically significant negative relationship between math and college going for EL students in contrast to the three other groups. Having completed college preparatory math, immigrant EL students are not only significantly *more* likely than the other three groups to go to a two-year college, but also significantly *less* likely to enroll in a four-year college. In general, math completion is significantly and positively associated with post-secondary enrollment (Adelman, 2006), a pattern confirmed for all other students. For immigrant EL students alone, college preparatory math is not only necessary to move onto a two-year college pathway, but also insufficient to ensure entry into a four-year college.

Limitations—Our findings, of course, are tempered by several methodological constraints inherent to the data and methods we employ. As with any secondary data analysis, missing data limit the generalizability of the findings. In addition, prior research suggests that Latino students are more prevalent among long-term ELs than Asian youth (Olsen, 2010). In an ideal context, we would employ a three-way interaction between race/ethnicity, immigrant linguistic status, and math course taking. However, given our sample distribution, a three-way interaction would overtax our models. Instead, we do our best to account for racial ethnic differences via control variables. Similarly, we retain black, white, and other (including multiracial) students in all models to account for the considerable diversity in academic experiences during high school.

Discussion & Conclusions: Implications for Policy and Practice

Recent growth of the immigrant language minority population suggests that society as a whole will benefit from optimization of all students' resources, including those that come from having immigrant parents. While research shows that immigrant youth perform better than expected given their social and economic resources (Crosnoe & Turley, 2011; Gibson, 1987; Kao & Tienda, 1995; Portes & Rumbaut, 2006; C. Suárez-Orozco, et al., 2009), few practitioners are aware of this phenomenon, much less its nuanced underpinnings. Examining the immigrant advantage, especially the mediating role of school-based linguistic status, in pre-service and in-service teacher training programs could improve how educators engage with immigrant youth. We argue that effective EL education extends beyond primary language support (Michael, et al., 2007; Padilla & Gonzalez, 2001) to include academic rigor and high expectations (Lewis, et al., 2012; Mosqueda, 2010; Valdés, 2001). Increasing educators' ability to capitalize on immigrant students' resources could improve achievement. Teachers of immigrant youth risk sympathizing, rather than empathizing with their students (Achinstein, 2012; Harklau, 2000; Ream, 2003); making parents' aspirations part of educators' discourse could change this pattern. To do so, it is critical to understand how school-based linguistic status may shape the immigrant advantage.

Tempered by a Linguistic Label: Expanding on the Immigrant Advantage Theory

The distinction between language proficiency and the EL label (Callahan et al., 2009, 2010; Thompson, 2013; Umansky, 2014) is critical to consider if we are to understand the immigrant advantage relative to linguistic status. Being an immigrant not in ESL results in significant advantages to college going; for EL students, immigrant status is complicated by what appears to be a label-specific pattern of undermatching. It might be that high-performing immigrant EL students undermatch despite their parents' aspirations as they have gradually internalized the low academic expectations representative of ESL contexts (Yoon, 2008, 2010). It would be remiss to suggest however, that these youth consciously choose to opt out of an academically rigorous context. Prior research indicates that EL students experience academically and socially marginalized school contexts that limit, if not preclude, rich academic preparation (Callahan et al., 2010; Ek, 2009). Raising educators' awareness of immigrant EL students' academic potential could have very real policy implications. Educators often consider EL and recent immigrant to be synonymous, masking

considerable diversity. Expanding awareness of the resources and experiences of *all* immigrant youth may improve educational outcomes.

Ultimately, the immigrant advantage appears to reflect not only the hopes and aspirations of foreign-born parents, but also the positioning of immigrant student groups within schools. Placement in ESL coursework may act as a signaling device, alerting educators and others to project limitations onto EL students' academic potential (Ek, 2009; Yoon, 2010). The lack of evidence we find to confirm an immigrant EL advantage may actually reflect the ability of foreign-born parents' expectations to buffer their EL-identified children from the negative effects of the secondary ESL context. In theory, if comparable non-immigrant youth were placed in ESL contexts, their outcomes could be much worse than those of their immigrant peers.

As both racial *and* linguistic minorities, immigrant EL students may be more sensitive to school processes and experiences than their peers (Jussim & Harber, 2005), placing them at the greater mercy of their school-based linguistic status, which carries considerable academic and social consequences via the processes it triggers (Dabach, 2015). Course placement appears to matter *more* for immigrant EL students, the group *least likely* to enroll in any college, *most likely* to opt for a two-year college when prepared for a four-year, and *least likely* to make their way into college preparatory math to begin with. Ultimately, the immigrant optimism to which Kao and Tienda (1995) refer may keep immigrant EL students' academic and school experiences from proving overwhelmingly negative.

A Critical Caveat

At this point, we take a moment to clarify that by no means do we suggest that EL identification itself is at fault, although the process is certainly not error-proof (Okhremtchouk, 2014), and remains in need of careful, well-implemented reform (Cook & Linquanti, 2015). We advocate neither removing nor eliminating EL-identification; rather we suggest greater oversight throughout the process. EL identification must trigger increased responsibility for the schools to provide pedagogically sound, research-based programs evaluated for their ability to improve EL student achievement (Hakuta, 2011). We take into consideration the wide range of possible services, the relatively sparse empirical literature examining specific instructional strategies (Calderón, et al., 2011; Goldenberg, 2013; Janzen, 2008), and the reality of secondary program implementation. Critics argue that current high school ESL programs are defined by limited academic rigor and underprepared teachers (Olsen, 2010). Effective programs could ensure that the primary language functions as a resource for new arrivals (Michael, et al., 2007), and that long-term EL students' academic abilities are optimized (Gold & Maxwell-Jolly, 2006). Revisiting the design and content of secondary EL instructional programs may be an essential first step toward realizing the full potential of all immigrant youth.

The mismatch between immigrant EL students' potential and their post-secondary choices may result less from the actual label, and more from the physical, social, and academic segregation that has come to define EL educational experiences (Gándara & Orfield, 2012; Harklau, 1999; Olsen, 2010). Even in more progressive contexts, EL students are often placed in segregated content area classes, with teachers expected to provide modified

instruction (Dabach, 2011). Many argue that secondary EL content area coursework covers less material and provides a watered-down curriculum (Callahan, 2005; Dabach, 2014; Ek, 2009). In addition, full integration of EL students, risk their placement with non-EL certified teachers unprepared to meet both their students' linguistic and academic needs. These patterns reflect not the EL identification process, but rather program design and development. Current programs embody educators' struggle to adequately address the educational and linguistic needs of the secondary EL student population, with relatively little research-driven pedagogy at their disposal (Goldenberg, 2013; Janzen, 2008). The issue lies not in student identification, but rather in the quality and quantity of EL services available to meet the needs of the actual EL population.

An Immigrant Undermatch? Consideration of Potential Covariates

As we consider the economic future, access to and completion of higher education are increasingly important. Our findings suggest a loss of academic potential among one segment of immigrant youth. Even relative to other immigrants with comparable parental education and income (the two strongest predictors of undermatching), immigrant EL students fail to experience the same returns to college preparatory math course taking. Their college enrollment patterns suggest evidence in support of a very specific *immigrant undermatch*.

We also note that in light of current political and social discourse, understanding college going among immigrant youth cannot occur without attention to legal status (Rodriguez & Cruz, 2009). We are careful to note that the ELS data do not identify whether or not a student has legal status, a factor that shapes access to financial aid in many, but not all states. As of fall 2014, 19 states had passed some form of a DREAM Act, wherein students who lack legal documentation for U.S. citizenship are eligible to establish in-state residency^{vii}, and in doing so, access financial aid. It is important to keep in mind that at the time of the ELS data collection (2002), over half of EL students in the US (54%) attended school in either California or Texas, both of which had recently passed state-level DREAM Acts. Since this time, empirical attention to undocumented students' educational experiences has increased considerably, as has students' awareness of the resources available to them. Currently, immigrant students who reside in DREAM Act states are significantly more likely to go to college (Flores, 2010). Future research might examine whether and how these state-specific decisions interact with students' school-based linguistic label to affect college going.

As a marginalized status group, immigrant EL students may be more sensitive to, and thus more likely to internalize, educators' low expectations (Blanchard & Muller, 2015; Jussim & Harber, 2005; Yoon, 2008). Schools and schooling may ultimately matter more for these students, suggesting that until educators better understand the resources they bring, and ESL contexts become synonymous with academic preparation and rigor, considerable academic potential will be lost. Immigrant EL students' academic aspirations, and those of their parents, matter little if they cannot access eighth grade Algebra at a rate comparable to their

^{vii}Table 1: State Laws Allowing College Students to Establish In-state Residency <http://www.law.uh.edu/ihelg/documents/Statute-TableOne.html>

peers (Gamoran & Hannigan, 2000; Spielhagen, 2006). Until immigrant EL youth are just as likely to be taught by certified teachers (Gándara et al., 2003), to attend adequately-funded schools (Fry, 2008; Schwartz & Steifel, 2004), and to enroll in grade level-appropriate coursework (Callahan et al., 2009, 2010) as non-immigrant, native English speakers, school-based linguistic status will continue to temper their potential. Ultimately, EL-labeled youth are unable to realize the immigrant advantage. Bringing an understanding of the immigrant advantage and its relationship with school-based linguistic status into educators' discourse will do much to realize the rich social, academic, and economic potential of this growing population.

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Figure 1.
Predicting the Probability of Two- and Four Year College Going by Immigrant Linguistic Status among Students who Completed College Preparatory Math

Table 1

Means and Proportions across Immigrant Linguistic Groups (Part I of II)				
	Third-plus Generation, Native English	Immigrant		
		Native English Speaker	Language Minority Not in ESL	EL Student
<i>N</i>	8,760	1,320	1,370	290
College Going				
No College	0.24	0.19	0.23	0.38 ^c
2-yr College	0.25	0.28	0.35	0.38 ^d
4-yr College	0.51	0.53	0.41	0.24 ^{bcd}
Background Characteristics				
Female	0.51	0.50	0.53	0.54
Race/Ethnicity				
White (Ref)	0.74	0.38	0.10	0.08 ^{ad}
Latino	0.06	0.27	0.58	0.67 ^{abcd}
Black	0.14	0.13	0.02	0.05
Asian	0.00	0.11	0.26	0.20 ^{abcd}
Other Race	0.05	0.10	0.03	0.01 ^{abcd}
Immigrant Generation				
1st Generation	0.00	0.19	0.46	0.75 ^{abcd}
2nd Generation	0.00	0.81	0.54	0.25 ^{abcd}
Recent Immigrant (<5yrs in U.S.)	0.00	0.03	0.05	0.46 ^{ac}
Parent Education	4.58	4.82	3.71	3.39 ^{ad}
Family Income	9.34	9.20	8.09	6.71 ^{bcd}
Age	15.81	15.69	15.74	15.84
Lives with Both Parents	0.60	0.62	0.69	0.55
Academic Characteristics				
Reading IRT Score	31.34	31.18	28.14	20.13 ^{bcd}
Math IRT Score	39.44	39.10	37.02	29.55 ^{bcd}
Highest Math Course				
Below Algebra II (Ref)	0.22	0.22	0.25	0.37 ^c
Algebra II	0.22	0.21	0.21	0.29
College Preparatory	0.55	0.57	0.54	0.34 ^c
Chemistry or Higher	0.81	0.82	0.81	0.61 ^c
Academic GPA	2.70	2.61	2.60	2.43 ^{ac}

Means and Proportions across Immigrant Linguistic Groups (Part II of II)

	Third-plus Generation, Native English	Immigrant		
		Native English Speaker	Language Minority Not in ESL	EL Student
<i>N</i>	8,760	1,320	1,370	290
School Characteristics				
Percent LEP	3.06	6.43	11.47	13.97 ^{abcd}
Percent Free/Reduced Lunch	20.41	23.28	31.39	32.58 ^{ad}
Northeast (Ref)	0.19	0.23	0.16	0.13
South	0.36	0.30	0.25	0.27 ^a
West	0.18	0.29	0.43	0.51 ^{ad}
Midwest	0.28	0.18	0.15	0.10 ^a
School Type				
Public (Ref)	0.91	0.90	0.94	0.99 ^{bcd}
Private	0.04	0.04	0.03	0.01 ^c
Catholic	0.05	0.07	0.03	0.00 ^{bcd}

^a difference between third-plus generation and all three immigrant groups significant at p<0.05

^b differences within all three immigrant groups significant at p<0.05

^c difference between EL students and all non-EL groups significant at p<0.05

^d difference between both LM groups and both NES groups significant at p<0.05

^a difference between third-plus generation and all three immigrant groups significant at p<0.05

^b differences within all three immigrant groups significant at p<0.05

^c difference between EL students and all non-EL groups significant at p<0.05

^d difference between both LM groups and both NES groups significant at p<0.05

Table 2

Multinomial Logistic Regression Predicting College Going (Part I)

VARIABLES	2yr College vs. None			4yr College vs. None			4yr College vs. 2yr College		
	Background	Academic	Interaction	Background	Academic	Interaction	Background	Academic	Interaction
Immigrant Linguistic Status (ref: Third-plus Generation)									
Immigrant Native English Speaker	0.38*** (0.14)	0.40*** (0.16)	0.56* (0.23)	0.35* (0.14)	0.44* (0.17)	0.38 (0.31)	-0.03 (0.11)	0.04 (0.12)	-0.18 (0.30)
Immigrant LM not in ESL	0.62*** (0.17)	0.58*** (0.17)	0.61*** (0.22)	0.48*** (0.16)	0.39* (0.19)	-0.03 (0.36)	-0.14 (0.14)	-0.19 (0.15)	-.64~ (0.35)
Immigrant EL Student	0.42~ (0.23)	0.53* (0.23)	0.25 (0.32)	-0.27 (0.30)	0.27 (0.34)	0.76 (0.51)	-0.69*** (0.22)	-0.26 (0.27)	0.51 (0.50)
Background Characteristics									
New Immigrant	-0.25 (0.29)	-0.47 (0.29)	-0.54~ (0.31)	-0.01 (0.31)	-0.49 (0.35)	-0.62~ (0.36)	0.23 (0.25)	-0.02 (0.27)	-0.08 (0.26)
Female	0.38*** (0.07)	0.25*** (0.08)	0.26*** (0.08)	0.54*** (0.07)	0.15~ (0.09)	0.14 (0.09)	0.16*** (0.06)	-0.10 (0.07)	-0.11 (0.07)
Age	-0.36*** (0.06)	-0.26*** (0.06)	-0.24*** (0.06)	-0.38*** (0.06)	-0.14* (0.07)	-0.14~ (0.07)	-0.02 (0.05)	0.11~ (0.06)	0.10 (0.06)
Race/Ethnicity									
Latino	-0.25~ (0.13)	-0.05 (0.14)	-0.11 (0.14)	-0.74*** (0.14)	-0.05 (0.16)	0.04 (0.17)	-0.49*** (0.14)	0.00 (0.15)	0.15 (0.15)
Black	-0.08 (0.12)	0.17 (0.13)	0.26* (0.12)	-0.03 (0.11)	1.09*** (0.14)	1.26*** (0.15)	0.05 (0.12)	0.93*** (0.13)	0.99*** (0.13)
Asian	0.26 (0.20)	0.20 (0.20)	0.08 (0.20)	0.57*** (0.20)	0.43* (0.20)	0.48* (0.20)	0.31* (0.14)	0.22 (0.15)	0.41* (0.16)
Other Race	-0.58*** (0.16)	-0.43* (0.17)	-0.48*** (0.17)	-0.46*** (0.16)	0.10 (0.21)	0.19 (0.21)	0.12 (0.14)	0.53*** (0.17)	0.67*** (0.17)
Parent's Education	0.11*** (0.02)	0.10*** (0.02)	0.09*** (0.02)	0.34*** (0.02)	0.26*** (0.02)	0.25*** (0.02)	0.23*** (0.02)	0.16*** (0.02)	0.16*** (0.02)
Family Income	0.08*** (0.02)	0.07*** (0.02)	0.06*** (0.02)	0.19*** (0.02)	0.14*** (0.02)	0.12*** (0.02)	0.11*** (0.02)	0.07*** (0.02)	0.06*** (0.02)
Both Parents	0.20*** (0.07)	0.11 (0.07)	0.11 (0.07)	0.45*** (0.07)	0.12 (0.09)	0.10 (0.09)	0.25*** (0.06)	0.01 (0.07)	-0.01 (0.07)

Multinomial Logistic Regression Predicting College Going (Part II)

VARIABLES	2yr College vs. None			4yr College vs. None			4yr College vs. 2yr College		
	Background	Academic	Interaction	Background	Academic	Interaction	Background	Academic	Interaction
Academic Characteristics									
Math IRT		0.01~ (0.01)	0.01~ (0.01)		0.02*** (0.01)	0.02*** (0.01)		0.01* (0.01)	0.01* (0.01)

Multinomial Logistic Regression Predicting College Going (Part II)

VARIABLES	2yr College vs. None			4yr College vs. None			4yr College vs. 2yr College		
	Background	Academic	Interaction	Background	Academic	Interaction	Background	Academic	Interaction
Reading IRT		-0.00 (0.01)	-0.00 (0.01)		0.03 ***	0.02 ***		0.03 ***	0.03 *** (0.01)
Highest Math Course									
Algebra II		0.38 ***	0.46 *** (0.11)		0.79 ***	0.79 *** (0.14)		0.41 ***	0.33 * (0.14)
College Prep		0.46 ***	0.49 *** (0.12)		1.54 ***	1.46 *** (0.15)		1.08 ***	0.97 *** (0.14)
Chemistry or Higher		0.25 ***	0.27 *** (0.10)		0.87 ***	0.88 *** (0.12)		0.63 ***	0.61 *** (0.12)
Academic GPA		0.47 ***	0.44 *** (0.10)		1.39 ***	1.45 *** (0.10)		0.92 ***	1.01 *** (0.10)
Interactions									
Immigrant NES*Algebra II			-0.38 (0.32)			-0.04 (0.43)			0.35 (0.40)
Immigrant NES*College Prep Math			-0.19 (0.33)			-0.03 (0.40)			0.16 (0.34)
Immigrant LM*Algebra II			-0.16 (0.28)			0.33 (0.46)			0.49 (0.42)
Immigrant LM*College Prep Math			0.02 (0.28)			0.46 (0.39)			0.44 (0.37)
Immigrant EL Student*Algebra II			0.15 (0.41)			-0.54 (0.68)			-0.69 (0.70)
Immigrant EL Student*College Prep Math			0.92 * (0.43)			-0.30 (0.57)			-1.22 * (0.58)
Constant	4.40 ***	1.18 (1.03)	0.97 (1.05)	3.05 ***	-6.65 *** (1.21)	-6.25 *** (1.24)	-1.35 (0.88)	-7.83 *** (1.07)	-7.22 *** (1.09)
N=11,740	11740	11740	11740	11740	11740	11740	11740	11740	11740

Standard errors in parentheses

p<0.001**
p<0.01*
p<0.05~
p<0.1