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Equitable Access for Secondary English Learner Students: Course Taking as Evidence of EL Program Effectiveness

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Abstract

Purpose—EL education policy has long directed schools to address English learner (EL) students' linguistic *and* academic development, and must do so without furthering inequity or segregation (Lau, 1974; Castañeda, 1981). The recent ESSA (2015) reauthorization expresses a renewed focus on evidence of equity, effectiveness, and opportunity to learn. We propose that high school course taking patterns provide evidence of program effectiveness and equity in access.

Research Design—Using data from the nationally representative *Educational Longitudinal Study of 2002 (ELS: 2002)*, we employ multinomial regression models to predict students' likelihood of completing two types of high school coursework (basic graduation, college preparatory) by their linguistic status.

Findings—Despite considerable linguistic, sociodemographic, and academic controls, marked disparities in high school course taking patterns remain, with EL students experiencing significantly less academic exposure.

Implications for Policy and Practice—Building on McKenzie and Scheurich's (2004) notion of an equity trap and evidence of a long-standing EL opportunity gap, we suggest that school leaders might use our findings and their own course taking patterns to prompt discussions about the causes and consequences of local EL placement processes. Such discussions have the potential to raise awareness about how educators and school leaders approach educational equity and access, key elements central to the spirit of EL education policy.

Language minority youth, those for whom English is not a native language, make up approximately 22% of the U.S. school age population (Ryan, 2013). Among language minorities, English learner (EL) students, those identified by the school system as in the process of learning English, make up an estimated 11%¹ of K-12 students nationwide. Since the seminal *Lau* decision (1974) charged schools to support EL students as they learned English and mastered academic content *in* English (Del Valle, 2003; Hakuta, 2011),

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¹<http://www.ncela.org>

educators have struggled to do so without increasing either academic inequity or segregation. EL programs that comply with education policy but limit EL students academically prove a dangerous, double-edged sword.

In response to the instructional ambiguity inherent in *Lau*, the Fifth Court decision in *Castañeda v. Pickard* (1981) established a three-pronged test by which to determine whether local education agencies (LEAs) had taken appropriate actions to ensure equitable access.² EL programs were to be (1) based on sound educational theory, (2) implemented adequately, and (3) after a period, proven effective in meeting EL students' linguistic and academic needs (Del Valle, 2003; Hakuta, 2011). The *Castañeda* test was later adopted into the federal Equitable Educational Opportunity Act (EEOA) (Garcia, 1987) to guide the selection, implementation, and, perhaps most importantly, monitoring of EL programs in U.S. schools. The reauthorization in 2015 of the Every Student Succeeds Act (ESSA) offers a renewed focus on evidence of effectiveness. The legislation alludes to *Castañeda's* structure and motivation, defining evidence-based as any

activity, strategy, or intervention that ... (ii)(I) demonstrates a *rationale based on high-quality research* findings or positive evaluation that such activity, strategy, or intervention is likely to improve *student outcomes* or other relevant outcomes; and (II) includes *ongoing efforts to examine the effects* of such activity, strategy, or intervention. ESSA (2015), Section 1177(21), pp. 781–3, emphasis added)

Echoing prior EL education policy, ESSA (2015) calls for evidence of effective instructional activities, strategies, or interventions founded on solid research and via student outcomes. In fact, state level criteria will need to be developed in response to ESSA, one of which must focus on opportunity to learn.

For over four decades EL education policies have called for programs that effectively meet EL students' linguistic and academic needs. In spirit, these policies were meant to improve academic equity and EL students' opportunity to learn; in practice, however, such parity is often difficult to achieve. Effective EL program design and implementation requires a delicate balance between provision of services and segregation (Thompson, 2013), between compliance and equity. We propose the use of course taking as evidence of academic equity for EL students.

The EL Opportunity Gap: Policy, Instruction, and Equitable Access

Whether intentional or not, the positioning of EL programs and students outside of the academic mainstream (Harklau, 1999; Yoon, 2008) presents an ongoing challenge to equitable access, especially in the content areas (Hopkins, Lowenhaupt, & Sweet, 2015). The ability to engage with rigorous academic content is critical; however, educators often conflate English proficiency with academic prowess and limit EL students' academic exposure while they learn English (Callahan, 2005; Dabach, 2014). Adding to the opportunity gap, too few teachers of EL students have been fully trained to meet their

²Equitable academic access was required by §1703(f) of the Equal Educational Opportunities Act (EEOA), retrieved from <https://www.law.cornell.edu/uscode/text/20/1703> on January 27, 2016.

charges' unique linguistic and educational needs (Gándara et al 2003; Samson & Collins, 2012). Examination of high school course taking by linguistic status can offer evidence of equity in access and EL program effectiveness. EL students can and should enroll in rigorous coursework; their transcripts ultimately attest to the effectiveness of programs in which they enroll.

Translating EL Instructional Theory into Programs and Practice

To understand the challenges to EL instruction, it is first important to note that neither *Lau* nor *Castañeda* specified any one particular instructional model, but rather tasked LEAs and school leaders with identifying and developing educational programs to meet the needs of the local EL population (Gándara, Moran, & Garcia, 2004). At the elementary level, multiple programs ranging from ESL pull-out to dual language maintenance emerged and evolved to meet bilingual EL students' needs. Due to the wide variety of elementary EL instructional options, considerable empirical and theoretical work has examined student outcomes by program type (López, McEneaney, & Nieswandt, 2015; Ovando, 2003; Umansky & Reardon, 2014), while relatively little work has focused on secondary EL education (Ruiz-de-Velasco & Fix, 2000). Only in the past decade has an empirical focus on secondary EL instruction begun to emerge.

Under the broad charge of improving academic access, both *Lau* and *Castañeda* granted LEAs and instructional leaders considerable latitude in EL program design and implementation. However, secondary EL programs must address greater heterogeneity in EL students' academic and linguistic needs than exists in the elementary grades, and must do so with fewer viable program options. We suggest that the complexity of secondary EL program requirements may contribute to a focus on compliance rather than educational equity. Most current secondary linguistic support services consist primarily of ESL coursework, offered as a stand-alone program or coupled with sheltered content area instruction (Calderón, Slavin, & Sánchez, 2011). These EL programs must be understood within the context of the master schedule, which must balance ESL placement with local graduation requirements as well as recommended college preparatory course taking sequences (Estrada, 2014; Spaulding, Carolino, & Amen, 2004; Zehler et al., 2003). The challenges to adequately implementing services at the secondary level are not unique to EL programs, but rather extend across numerous facets of the school context (Sizer, 1984). While autonomy in the choice of EL program design is certainly welcome, the dearth of research on secondary EL programs suggests a need to equip educators and school leaders with tools to determine locally what works for their secondary EL students. In particular, secondary school leaders who lack a solid understanding of EL instructional theory and practice may face considerable challenges in improving equity in academic access for EL students.

Program Design and Academic Equity

Scholars have noted that the first and second prongs of *Castañeda*—a firm foundation in educational theory and adequate implementation via staffing and resources, respectively—are often easily met with little attention paid to actual EL student performance (Del Valle, 2003). Arguably, only the third prong, effectiveness in improving equity, requires that

educators attend to EL student outcomes (Del Valle, 2003; Hakuta, 2011). This is not to say that the development of educators' instructional capacity is not important; it is critical if EL student achievement is to improve. However, the three prongs must work together. Without grounding in the theory, pedagogy, and practice required to bring EL students closer to academic parity, EL student outcomes alone cannot answer how well a program addresses equity.

To effectively educate EL students, schools, districts, and states must have the internal capacity to consider the adequacy of their EL programs, and arguably, many do not (Gándara et al., 2003). Historically, the success of EL education has centered primarily on the narrow goal of reclassification, the designation of EL students as sufficiently fluent in English to move out of EL status and into mainstream instruction (Gándara & Merino, 1993; Grissom, 2004; Linqunti, 2001; J. P. Robinson, 2011; Umansky & Reardon, 2014). However, reclassification rates may not be the most accurate indicators of equitable educational access (Hopkins et al., 2013; Robinson-Cimpian et al., 2016); course taking and other outcomes may more accurately grasp academic equity. Consideration of EL programs should tease apart contextual effects whenever possible, while also accounting for heterogeneity within the EL student population. We draw upon *Castañeda's* third prong, the effectiveness of the program in reducing inequity, to motivate our analysis of nationally representative high school transcript data. We propose that course taking patterns offer evidence of EL program effectiveness, allowing us to consider equity in access and exposure.

Equity Traps and EL Status

Frequently, EL students are positioned according to their perceived deficits (Gutiérrez & Orellana, 2006), namely their lack of proficiency in English. Educators and schools often label and define EL students by their language (Callahan & Gándara, 2004; Olsen, 2010; Ruiz, 1984), using a deficit orientation that reflects not students' nascent, resource-rich bilingualism, but rather their 'limited' or developing English proficiency. McKenzie and Scheurich (2004) build upon the danger of educators' deficit orientation regarding certain student groups to theorize an "equity trap." In the case of EL students, an equity trap occurs when teachers develop a false sense of assurance that validates their low academic expectations based on EL students' relatively limited English proficiency. Research in bilingual education finds the roots of this phenomenon in the 'pobrecito syndrome' (Berzins & López, 2001) wherein educators sympathize, rather than empathize with their students, and expect less of them due to the challenges they are perceived to face at home. Likewise, in sociology, equity traps manifest themselves via Ream's (2003) theory of counterfeit social capital, wherein educators care for their Mexican-American students, yet expect little of them and do little to engage with their academic futures, curtailing their academic achievement. An EL equity trap allows teachers to equate limited English proficiency with limited intelligence, liberating themselves from the responsibility to engage their students in rigorous academic instruction. Caught in such a trap, educators cannot recognize the strengths—the linguistic, social, and cognitive resources—that EL students bring with them to the classroom.

EL students and other racial, ethnic, and linguistic minorities often experience what Valenzuela (1999) terms 'subtractive schooling,' practices that minimize the cultural and linguistic resources students bring with them to the classroom. Subtractive schooling defines students by what they lack, or are perceived to lack. In her rich ethnographic study of Latino language minority adolescents, Valenzuela illustrates how seemingly neutral and innocuous educational practices are actually assimilative in nature. Shaping their educational discourse around students' perceived deficits, the educators in Valenzuela's study concluded that their immigrant language minority students didn't value education, and then used this 'knowledge' to justify their low educational expectations. With this two-step process, these teachers absolved themselves of responsibility for their students' poor performance, exemplifying a classic equity trap (McKenzie & Scheurich, 2004). Importantly, these educators failed to recognize how the school's placement practices marginalized students physically, socially, and academically.

A subtractive orientation negates EL students' linguistic and cultural assets and risks alienating this growing population of potential bilingual, biliterate citizens (Bartlett & García, 2011). Ethnographic research has described EL instructional contexts as devoid of the rich academic and linguistic discourse necessary to gain a foothold in the educational system (Ek, 2009; Harklau, 1994a). Too often, EL instructional programs marginalize the very students they are designed protect by keeping them at the periphery of the educational system, catching them in a perpetual equity trap.

Isolating Evidence of Academic Equity

The tension inherent in addressing both EL students' linguistic *and* academic needs continues to challenge educators and school leaders who hope to improve equity in academic access (Estrada, 2014; Thompson, 2013). EL students are not only new to the language, but also often come from racial and ethnic minority groups, lower SES households, and have immigrant parents, all characteristics that place them outside the dominant group norm. Social and academic stratification in U.S. education is not a new concept; researchers have investigated associations between race/ethnicity, social class, and schooling prior to and since the advent of the Coleman report (1966). All too often, teachers point to existing disparities in achievement by EL status to justify their low expectations for EL students (Valenzuela, 1999; Yoon, 2008). Consideration of whether and how EL programs provide evidence of academic equity requires attention to factors associated with both EL status and academic achievement.

Investigation of equitable access by linguistic status thus requires consideration of students' social and demographic background as well as other academic experiences associated with course taking outcomes. Both parental education and family income are associated with high school course taking (Campbell et al., 2000; Oakes, 1985). Complicating the matter, EL and other immigrant students are more likely to come from low-income homes and have parents with relatively low education levels (Urban Institute, 2006). Likewise, just as school demographics have long been associated with individual student outcomes (V. E. Lee & Bryk, 1989), EL students have been found to attend poorer, more urban schools with fewer certified teachers than their English proficient peers (Fry, 2008; Gándara et al., 2003). Early

high school placement contributes to the stratification of educational achievement, attainment, and postsecondary opportunities (Adelman, 2006; Muller, Riegle-Crumb, Schiller, Wilkinson, & Frank, 2010). In addition, it is important to consider those factors associated with achievement that are specific to language minority youth, such as English proficiency, native language use, and length of time in U.S. schools (Bankston & Zhou, 1995; Collier, 1992; Thomas & Collier, 2002). Existing racial and socioeconomic disparities in course taking and achievement (J. Lee, 2002; Riegle-Crumb & Grodsky, 2010) further complicate the EL opportunity gap. These are just a few of the factors associated with both achievement and the likelihood of being an EL student.

The Argument for EL Equity via Course Taking

We propose course taking as evidence to be used in the examination of EL program effects for several reasons. First and foremost, the dual and at times conflicting purposes of secondary education make it critical to consider EL programs via a focus on equity and access. Secondary schools must prepare students with the skills to enter not only the workforce (Bowles & Gintis, 1976) but also higher education (Adelman, 2006). At its core, the high school curriculum is designed to ensure that students complete the basic coursework for graduation (Gamoran, 1987; Lucas, 1999; Oakes, 1985). While graduation typically requires accumulation of a *finite set* of credits in a range of core subjects (Shettle et al., 2007), preparation for college requires *progression through* subject areas. This is especially true of the more hierarchically ordered subjects, science and math (Riegle-Crumb, 2006), where completion of key benchmarks (e.g., Algebra II, Chemistry), is highly associated with postsecondary enrollment (Adelman, 2006). In fact, college preparatory and AP course taking patterns have been used as an indicator of equity in academic access at the local level (Haxton & O'Day, 2015). Students' progression through and persistence in a given area implies a degree of cumulative academic preparation and experience that distinguishes college preparatory from high school graduation coursework.

Historically, consideration of EL programs has focused primarily on English acquisition (finite), rather than students' academic preparation and achievement (progression) (Conger, 2009; Grissom, 2004; Mahoney & MacSwan, 2005; Parrish et al., 2006; J. P. Robinson, 2011). A programmatic focus on language acquisition may in fact undermine the importance of EL students' academic access and opportunities. Research suggests that EL instructional placement may result in academic and social segregation and marginalization (Gándara & Orfield, 2012; Harklau, 1994b; Mosqueda, 2010). In fact, placement in ESL coursework appears to preclude access to other, academically rigorous courses (Callahan, et al., 2009, 2010; Valdés, 2001; Valenzuela, 1999). Many EL programs focus on compliance with *Lau* and *Castañeda* through the provision of linguistic support services; we propose instead that they focus on the spirit of these policies, equity in academic access. Without such a focus, EL programs run the risk of validating a persistent, damaging equity trap (McKenzie & Scheurich, 2004). Prioritizing the letter, rather than the spirit, of EL education policy may result in unintentional marginalization.

Purpose

Academic experiences shape students' futures; it is for this reason that EL education policy calls attention to students' academic development. One way to provide evidence of academic exposure, preparation, and opportunity is through course taking. In an attempt to meet ESSA's call for evidence-based programs that improve EL students' academic equity, we use nationally representative data to investigate high school course completion. Our analyses take into account factors known to influence enrollment in general as well as others that may more directly shape EL students' trajectories. Specifically, we pose the following research questions:

How does EL students' academic access, as measured by completion of high school coursework, compare with that of their peers not placed in ESL, both native English speakers and other language minorities?

Do disparities in course taking remain across the three cohorts once we take linguistic, sociodemographic, and academic characteristics and experiences into account?

To answer these questions, we first explore two levels of course taking—high school graduation and college preparatory—as evidence of all students' academic access. We then investigate whether disparities in course taking outcomes persist once we consider various linguistic, social, and academic factors.

Data and Methods

In our analyses, we employ student survey and high school transcript data from the *Educational Longitudinal Study of 2002 (ELS: 2002)*³, in which a nationally representative sample of 16,380⁴ spring-term 10th graders enrolled in approximately 750 public schools were first surveyed by the National Center for Education Statistics (NCES) in 2002. We use variables drawn from the 2002 and 2004 student surveys, the 2002 parent survey, and the high school transcript data as well as measures of school characteristics to develop our models. Retrospective questions on the student and parent surveys provide important information on student sociodemographic characteristics, family background, and academic history. We exclude students who did not have at least one full year of transcript data, leaving us with an analytic sample of approximately 14,920 respondents with valid first follow-up panel weights. Less than one year of transcript data could suggest that the student either dropped out or recently immigrated, neither of which is uncommon among language minority youth. In fact, the limits we include suggest that our results are conservative estimates, representative of relatively more academically oriented students who remained enrolled in spring of the sophomore year.

³For more information on the *ELS: 2002* dataset, please see: <http://nces.ed.gov/surveys/els2002/>

⁴Per NCES restricted use data guidelines, all unweighted sample sizes are rounded to the nearest 10, and we report only weighted means and proportions.

Dependent Variables

We used the *ELS* high school transcript data to construct a series of indicators that combined to measure two distinct outcomes: completion of coursework sufficient for (1) high school graduation and (2) admission to most four-year colleges.

High school graduation course taking—Our first outcome of interest includes completion of at least four credits of English and three credits each of social studies, mathematics, and science following the work of Shettle and colleagues (2007) examining the transcripts of high school graduates across the nation. We created a dichotomous indicator to mark completion of all of the above requirements (high school graduation course taking=1).

College preparatory course taking—Following the template established by Adelman (2006) and others, our second outcome includes not only completion of high school graduation coursework (above), but also progression through at least Algebra II in the math sequence, completion of at least two of the three main science fields (biology, chemistry, or physics), and two credits of a foreign language. We categorized students who took pre-calculus or calculus, but not Algebra II, as having met the math requirement. We coded students who completed at least one credit (two semesters) of biology, chemistry, or physics as completing a course in that subject. From this series of four outcomes (graduation, math, science, and foreign language), we then generated a dichotomous indicator to mark completion of *all four* areas for admission to a four-year university (college preparatory course taking=1).

Independent Variables

Language cohorts—Our analytic sample consists of three mutually exclusive student cohorts, divided first by native language and then by ESL placement. Using the *ELS* base-year survey question, “*Is English your native language (the first language you learned to speak when you were a child)*”, we first identified native English speakers (1=yes, 0=no). We identified *language minorities* as those students who responded that English was *not* the first language they learned to speak. Among this population, we further identified two language minority subgroups based on placement in ESL coursework (1=yes, EL student, 0=no, not EL student).

Using a coding system for all high school transcripts, we reviewed a course-level file for all participants and searched for course titles based on key words/phrases known to indicate ESL-type courses. Key words included, but were not limited to, the following indicators of services and terms specific to EL students: *English language learner* (ELL, EL, LEP); *English as a second language* (ESL, ESOL, second language, language / English development); *sheltered or SDAIE* (SHL, SHEL, SDAIE); and *bilingual*⁵ (BIL, BL). From a total of nearly 640,000 unduplicated course records, we identified almost 3,500 unique ESL-type courses taken by respondents in the *ELS* dataset. We cast the ESL course taking net wide in order to capture a sample of EL students likely to resemble the range of EL students

⁵We include bilingual courses despite their substantive differences as they account for less than 3% of the courses taken, and when we disaggregate our data further, less than 30 students in the sample had a bilingual course listed on their transcript preventing separate analyses. Models run both with and without these EL students produced no substantive differences in results.

enrolled in secondary schools. Final models not only distinguish between native English speakers and language minorities, but also determine, among the larger language minority population, which students experienced ESL placement during high school. These language cohorts were designed to provide secondary school leaders a relevant frame of reference when considering their local student populations.

These divisions produce three mutually exclusive language cohorts for whom we then compare high school graduation course taking: (1) native English speakers ($N= 11,570$); (2) language minorities *not placed in ESL* ($N= 2,600$); and (3) EL students ($N= 750$). As with any survey dataset, it is possible that students did not accurately describe their linguistic status (i.e., the language they first learned to speak). To address this, we include a variety of controls selected to account for students' personal characteristics as accurately as possible.

Linguistic background—Experience in U.S. schools is critical to understanding language minority achievement; to this end, we include length of time in U.S. schools for *all* students, measured by grade upon entry. To more directly address self-reported English proficiency, we included measures that summarize the self-reported English proficiency of the student ($\alpha=0.94$) and the parent ($\alpha=0.96$) on a scale of 1–4 in reading, writing, and listening/speaking drawn from the base-year student and parent surveys. Clearly, self-reported English proficiency is not infallible; prior research suggests that self-reports not only correlate with external measures of language proficiency at a rate of about 0.5 (MacIntyre, Noels, & Clément, 1997), but they also reflect language attitudes and preferences, especially among adolescents, our population of interest (Hakuta & D'Andrea, 1992). We supplemented self-reported English proficiency with students' 10th grade English reading test scores, discussed under 'academic background' below.

In addition, research has illustrated the important association between native language maintenance and academic achievement and attainment among language minority youth (August & Hakuta, 1997; Bankston & Zhou, 1995; Collier, 1992; Thomas & Collier, 2002). However, the *ELS* dataset and subsequently our analyses are unable to distinguish between those who ever received native language instruction and those who received English-only linguistic support services prior to high school. Given that nationally, the vast majority of EL students, especially adolescents, *only* ever receive support in English (Zehler et al., 2003), we attempt to address the important role of native language maintenance through the inclusion of two native language variables. Parent and student native language use scales summarize how often the student and the parent spoke their native language to others in 2002 ($\alpha=0.93$ and $\alpha=0.94$, respectively). It is important to note that this variable offered in the *ELS* dataset measures the *frequency* of native language use, not to be confused with *proficiency*.

Social background—To account for the potentially confounding influence of systematic variations in social background, we included controls for gender, race/ethnicity, and social class. We included both a dichotomous measure indicating whether at least one parent has a bachelor's degree as well as an ordinal measure of family income. The parent completing the survey reported family income by selecting one of these categories: 1=None, 2=\$1,000 or less, 3=\$1,001 – \$5,000, 4=\$5,001 – \$10,000, 5=\$10,001 – \$15,000, 6=\$15,001

– \$20,000, 7=\$20,001 – \$25,000, 8=\$25,001 – \$35,000, 9=\$35,001 – \$50,000, 10=\$50,001 – \$75,000, 11=\$75,001 – \$100,000, 12=\$100,001 – \$200,000, 13=\$200,001 or more. We also included a control for number of siblings to address family size as it relates to income.

Academic experiences and background—This set of controls begins with several measures of student academic history. We first included age to address whether a student is at or above age for grade level. To address the cumulative nature of high school course taking, we included 9th grade math and science course placement as an indicator of the student’s starting point in high school. Ninth grade positions in the math and science course taking sequences were measured by ordinal indicators ranging from 0 (no math) to 9 (calculus) and 0 (no science) to 6 (physics), respectively⁶. To more directly address school performance, we included two measures of early academic achievement: 9th grade GPA in academic core courses and score on the 10th grade reading test administered by NCES during the base-year survey. This reading test score also serves to balance students’ self-reported English proficiency described earlier. We also included students’ postsecondary educational expectations (two-year college, four-year college, none). In addition, this section includes, but in the interest of space does not display, an additional set of variables⁷ describing early academic experiences that fortify the models.

Finally, we included measures to control for 10th grade school characteristics: school sector (public, Catholic, private), region, and urbanicity as well as measures of the percentage of students at each school who are in the following categories: eligible for the free or reduced lunch program, racial minorities, and labeled EL or ‘limited English proficient’ (LEP). Again, these variables are included in all models, but coefficients are not shown in tables due to space considerations. Missing values for all independent variables were addressed through single imputation in Stata. In addition, all models include the transcript weight to address missing data.

Analytic Plan

Our models employ the transcript weight in all analyses. The transcript weight applies to sample members who were respondents in both the base year and first follow-up as well as to sample members who were respondents in the first follow-up and have imputed data for the base year. We conducted multinomial logistic regressions to estimate the odds of attaining these high school course taking benchmarks while accounting for differences in background across the three language cohorts. We estimated robust standard errors to account for the clustering of students within schools (Primo, Jacobsmeier, & Milyo, 2007) using the cluster command in Stata.

⁶0=no math, 1=basic/remedial, 2=general/applied, 3=pre-algebra, 4=algebra I, 5=geometry, 6=algebra II, 7=advanced math, 8=pre-calculus, and 9=calculus; science: 0=no science, 1=basic/remedial, 2=general/earth science, 3=biology, 4=chemistry, 5=advanced science, 6=physic

⁷Academic and cognitive variables included but not displayed: preschool and head start attendance, grade level retention, remedial math and English placement, material and cognitive resources in the home, parental reports of cognitive abilities, 9th grade credits in low-level and non-core coursework, semesters failed in 9th grade, dropped out or retained after 10th grade, and others’ college expectations for the students. Full models available upon request.

Limitations

Although the *ELS* data indicate which language minority students experienced ESL placement in high school, they do not indicate whether any of the remaining language minorities ever received services, nor, if they did, when they might have exited those services. These models speak only to students' experiences during high school by language cohort. We are also careful to note that it is beyond the scope of this study to attempt to either explore the theoretical foundations of the various secondary EL programs or to identify teachers' practices within such programs. Clearly, these very timely and important topics extend well beyond the scope of the available *ELS* data. Our analyses examine equity and access on a large scale, drawing from a nationally representative sample of high school students to identify trends and patterns in course taking by EL students and their peers. By definition, such large-scale analyses cannot speak to the specific needs and idiosyncrasies of local contexts. Despite the fact that these data can specify neither the type, the caliber, the theoretical underpinnings of a particular school's EL instructional program, nor the needs of that school's EL student population in particular, it is our hope that our findings will provide a useful tool to prompt discussions that examine equity and access as evidenced by the course taking patterns that result from current EL education policies.

Results

We first present weighted descriptive statistics for our analytic sample. Table 1 shows statistically significant differences in the social and academic backgrounds of students by the three mutually exclusive language cohorts. In *ELS*, we see that EL students demonstrate lower levels of parental education and income and are more likely to be racial minorities than either native English speakers or language minorities *not placed in ESL*. In addition, exploratory descriptive statistics⁸ show that both language minority cohorts attend schools with higher poverty rates and higher concentrations of racial minorities than native English speakers.

Table 1 also provides some insight into the cohorts' linguistic backgrounds and academic experiences. While 99% of native English speakers and 87% of language minorities *not placed in ESL* entered U.S. schools in kindergarten, a full 48% of EL students did so as well. In fact, long-term EL status applies to over half (54%) of the EL student sample educated in U.S. schools for seven years or more (Olsen, 2010). Despite stereotypes that suggest most high school EL students are recent immigrants with limited English skills, Table 1 shows that only one-third of EL students in the *ELS* sample fit this profile, having entered U.S. schools after 7th grade.

A review of academic background characteristics demonstrates disparities as well. The bottom third of Table 1 shows that EL students enroll in lower levels of 9th grade science and mathematics and earn lower grades and reading test scores relative to their peers not in ESL. Given these trends, it is not surprising that EL students are also the least likely to expect to enroll in a four-year college, or any college for that matter. Accounting for these and

⁸In our initial exploratory analysis, we compared means on school-level characteristics for the three mutually exclusive language cohorts. Due to space constraints, we do not show these coefficients; however, they are available from the author upon request.

multiple other differences produces a more valid, and subsequently more valuable, picture of how course taking might provide evidence of improved academic equity.

Identifying Gaps in Academic Exposure through Course Taking

In response to our first research question, we present Figure 1, which displays the weighted proportions of students in the *ELS* who completed (1) high school graduation and (2) college preparatory course taking by 10th grade language cohort. The left-hand columns represent the proportion of students in each cohort completing all *high school graduation coursework*, and the right-hand columns represent the proportion completing all *college preparatory coursework*. Over half, 51% of native English speakers accumulated all the credits necessary for high school graduation in contrast to 44% of language minorities *not in ESL* and 19% of EL students. Similarly, 38% of native English speakers completed all of the recommended college preparatory coursework, compared with 31% of language minorities *not in ESL* and 11% of EL students. These baseline gaps demonstrate significant disparities when comparing EL students with the other two language cohorts. However, it is also important to note that at the baseline (Figure 1), language minorities *not in ESL* also demonstrate significantly lower levels of course taking relative to native English speakers. All between-group mean differences in course completion in Figure 1 are statistically significant (at least $p < 0.01$).

By design, these bivariate statistics are, and should be, similar to what high school leaders might expect to find if they were to simply disaggregate students' course taking by language cohort. However, these results do not account for the possibility that language minority students' outcomes may be associated with the many linguistic, social, and academic differences (Table 1) that educators may be aware of, but remain well beyond the school's control. To address this issue, we next estimated logistic regression models to predict the probability of completing high school graduation and college preparatory coursework. We present coefficients from these models in Tables 2 (graduation) and 3 (college preparatory). Finally, we present Figure 2 to facilitate a more intuitive understanding of the results presented in Tables 2 and 3.

Predicting Preparation for Graduation

Table 2 (reference group: EL students) displays the coefficients from the logistic regression models predicting completion of all recommended high school graduation coursework. It is worth noting that even with the inclusion of linguistic, social, and academic background characteristics, native English speakers and language minorities *not in ESL* maintain a significant advantage in coursework completion over their EL peers. Even net of considerable controls, EL students' high school graduation course taking lags significantly behind. At this point, however, it is also important to note that any baseline differences in completion of graduation coursework between language minorities *not placed in ESL* and native English speakers⁹ become moot with the inclusion of academic experiences, illustrating the powerful role of schools and schooling relative to course taking outcomes.

⁹We ran the same models with native English speakers, rather than EL students, set to the reference group to more accurately assess cross-group comparisons. Coefficients from these models are not shown as they replicate the information provided in the tables where EL students are set to the reference group, but they are available upon request.

Predicting Preparation for College

Table 3 (reference group: EL students) displays coefficients from the logistic regression models predicting completion of all recommended college preparatory coursework. Again, the inclusion of linguistic, social, and academic characteristics fails to chip away at the course taking gap for EL students relative to the other two cohorts. However, the differences in completion of college preparatory coursework between language minorities *not placed in ESL* and native English speakers¹⁰ are rendered insignificant with the inclusion of academic background and experiences. Educators and schools are able to promote equity in both levels of course taking for language minorities *not in ESL* relative to native English speakers.

Language Cohorts' Relative Academic Preparation

We now move to Figure 2 to facilitate interpretation of our course taking results. Tables 2 and 3 set EL students as the reference group; coefficients in these tables thus compare EL student performance with that of both English proficient cohorts, language minorities *not in ESL* and native English speakers. To offer greater clarity, Figure 2 compares the performance of the two English proficient groups as well and, in doing so, presents a visual closing of the gap. Figure 2 shows how with the inclusion of linguistic, social, and, most importantly, academic background, the course completion of language minorities *not in ESL* comes to match that of native English speakers for both graduation and college preparation. The inclusion of these factors associated with achievement explains some of the disadvantage experienced by language minorities, but only for those *not placed in ESL*. Any earlier statistically significant disparities in course completion between the two English proficient groups are rendered moot with the inclusion of linguistic, social, and academic background.

It is noteworthy, however, that the inclusion of linguistic, social, and academic controls accounts for only a small portion of the disadvantage experienced by EL students. The inclusion of these variables increases the probability of completing high school graduation coursework by 14 points, but college preparatory coursework by only 2, suggesting a disproportionate focus on low outcomes for EL youth. The likelihood that an EL student will leave high school prepared to apply to college *barely* increases when we account for numerous linguistic, social, and academic characteristics, providing evidence in support of a persistent equity trap (McKenzie & Scheurich, 2004) for EL students. It appears that here ESL placement precludes, rather than improves, equity in access as evidenced by college preparatory course taking.

Discussion and Implications

Examination of EL students' course taking patterns provides evidence regarding equity and access. Researchers have argued that EL students constitute a status group created (albeit unintentionally) in the wake of *Lau* and *Castañeda* (Callahan, et al., 2009, 2010; Menken & Kleyn, 2010; Olsen, 2010). Our findings suggest that EL students, even net of language, social, economic, and academic characteristics, do in fact function as a marginalized status

¹⁰See End Note 6.

group, demonstrating inequitable outcomes despite the policies in place to protect them. While some disparities can be attributed to background and prior achievement, our results show that disparate access remains the norm for EL students relative to their peers, even net of substantial controls.

Middle School Leaders at a Critical Juncture: EL Students' Timely Exit from EL Status

One unintended byproduct of poorly implemented and monitored EL programs is the creation of a class of students now labeled with long-term EL status. Olsen (2010) and Menken and Kleyn (2009) argue that poorly implemented, academically anemic EL programs marked by social and linguistic segregation place students in long-term EL status. Educated primarily, if not solely, in U.S. schools, these EL students are generally highly proficient in oral English, disrupting educators' expectations of their linguistic needs. In fact, long-term status tends to indicate a need for academic intervention to compensate for gaps in content area exposure, but not for linguistic support (Calderón & Minaya-Rowe, 2011; Menken & Kleyn, 2010; Olsen, 2010). As a result, school leaders face the challenge of deciding whether to place these students according to their long-term EL status or their academic needs.

At this point, we consider the relatively comparable course taking patterns of the other two groups: language minorities *not in ESL* and native English speakers. Given that nearly 90% of the language minorities not in ESL entered U.S. schools in kindergarten, it is safe to speculate that a certain proportion received EL instructional support in the elementary and middle grades. Given the limits of the *ELS* data, it is difficult to estimate how many, although we can safely ascertain that at least some were exited from EL status prior to entry into high school. National reports suggest that many language minorities *not* placed in ESL during high school received at least some linguistic support services earlier in their school careers (Zehler et al., 2003). This closing of the gap between language minority *not in ESL* and native English speakers through academic experiences, as illustrated in Figure 2, is promising. Although certainly not conclusive, this finding suggests that if national, longitudinal student data were available, researchers might be able to better identify which instructional models were most effective, for whom, and in what contexts. In fact, prior research suggests that in at least one context, the provision of bilingual services (as opposed to English-only) in the elementary grades is associated with stronger academic outcomes by the end of high school among students initially identified as ELs (Umansky & Reardon, 2014). Some language minority students' success may be related to early EL services and EL program exit prior to the end of middle school.

Building upon a transformative leadership approach (Shields, 2004), local school leaders could couple our findings with their own local course taking data to open discussion with feeder elementary and middle schools regarding EL students' experiences as they progress through the grade levels. Ideally, these discussions would explore EL students' academic as well as linguistic development. Some states are beginning to address EL students' academic growth while in EL programs through accountability measures. For example, Texas recently implemented an EL Progress Indicator¹¹, designed to help schools and districts monitor EL program effectiveness. A secondary goal of this indicator is to prevent long-term EL status.

Returning to the spirit of *Lau*, we find little evidence of equitable access for EL students labeled with long-term status; half of the high school EL students in our national sample entered U.S. schools in kindergarten, suggesting that their EL programs may have been poorly implemented and academically weak (Menken & Kleyn, 2009; Olsen, 2010). Both middle and high school leaders will need to carefully monitor the progress of their EL populations and identify any programmatic features that may prevent an EL student who entered in early elementary from exiting EL status. Addressing the processes that produce long-term EL status before they cause permanent damage would do much to improve academic equity.

Equity, Access, and Long-term EL Status

If the spirit of *Lau* and *Castañeda* is to provide EL students with equitable academic access, school leaders who hope to improve their EL programs will need to guide their teachers to think in terms their students' postsecondary preparation (Hopkins et al., 2013). Examining disparities in the completion of both graduation and college preparatory course taking offers a very tangible measure of academic development. Historically, EL programs have targeted high school graduation (Callahan & Gándara, 2004); we argue that this relatively low bar for educational attainment reflects a pervasive EL equity trap (McKenzie & Scheurich, 2004). Simply put, some educators justify high school graduation as the end goal for EL students because, according to their interpretation of EL status, limited English proficiency precludes full participation. As a result, learning the language and the culture is considered 'enough' for EL students to make it in adulthood, leaving them at a perpetual disadvantage.

Our findings contradict this narrative of English primacy; nearly two-thirds of EL students in the *ELS* dataset entered U.S. schools in the elementary grades. The resulting long-term EL status represents an unfortunate byproduct of a deficit-oriented, compensatory approach that permeates many EL programs (Menken & Kleyn, 2010; Olsen, 2010), marking students who are neither new to the United States nor new to English. It would be a stretch to suggest that long-term EL status indicates limited familiarity with the English language or the U.S. educational system. We hypothesize instead that this phenomenon may be the result of a particularly onerous equity trap (McKenzie & Scheurich, 2004): EL status suggests to teachers a need to limit their instructional rigor and academic expectations while students learn English. As this occurs year after year, EL students fall further behind, increasingly unable to exit EL status due to low levels of academic achievement, a consequence of limited academic exposure (Callahan, 2005; Liguanti, 2001). Even today, many EL programs focus on English acquisition at the expense of academic content; Arizona's four-hour EL program model is one example (Gándara & Orfield, 2012). Here we are careful to clarify that we neither suggest nor condone the eradication of secondary EL programs. Instead, we call for a greater alignment of program goals with the academic and linguistic needs of the local EL student clientele.

¹¹http://ritter.tea.state.tx.us/perfreport/ell_faq.html

The Spirit of *Lau* and *Castañeda*: From Theory into Practice

Inherent in *Lau* and *Castañeda* is a call for schools to take responsibility for students' linguistic and academic needs (Hakuta, 2011); together they prompt all educators to prioritize equity in academic access. At present, ESSA (2015) calls for the disaggregation of state-level indicators of student performance; course taking, disaggregated by EL status, could provide evidence of students' opportunity to learn. Another specific focus of ESSA (2015) is the need to align EL program entry (English language) and exit (academic achievement) criteria, which have historically been mismatched, much to EL students' detriment (Ragan & Lesaux, 2006). Aligning these criteria may prompt school leaders to consider the strengths and needs of the EL students they have, and whether their chosen EL programs address the needs of their local populations, which could improve students' course taking patterns. School leaders are particularly well positioned to affect change (Klar & Brewer, 2013; V. M. J. Robinson, Lloyd, & Rowe, 2008), especially if they focus on the relationship between teaching and learning. The strength of a school's EL instructional program may rest on its leaders' ability to identify and articulate what EL student success looks like in practice. As school leaders become more comfortable with the use of course taking as evidence of equity and access, states may begin to consider inclusion of course taking, disaggregated by EL status, as one of the state-level indicators required under ESSA.

Menken and Kleyn (2009, 2010) argue that poorly designed and implemented EL instructional programs result in the production of a long-term EL status group, citing not only less-than-rigorous academic content, but also a lack of programmatic consistency. Focused school leaders, grounded in EL research and theory, can effectively reform and reshape student achievement (Marks & Printy, 2003; Waters, Marzano, & McNulty, 2003). Improving schooling for EL students requires a focus on academic preparation as well as, if not as a means to, English acquisition. Theoharis and O'Toole (2011) recommend that school leaders engage their teachers and staff directly in reform efforts. In order for school leaders to successfully prioritize equity, Shields (2004, 2010) argues they must first initiate transformative dialogues around the needs of students who experience inequitable academic access. We suggest that findings from our nationally representative analyses can be used to initiate rich discussions locally to promote an equity-based approach to EL education.

Discussion of our findings as they relate to the effectiveness of local EL programs in improving equity in academic preparation may help educators identify and address critical junctures in the placement process that produce inequities in academic access and preparation. Identification of course taking benchmarks and common academic trajectories has the potential to improve EL programs' ability to provide equitable academic access. The potential of the growing EL population to contribute to society in meaningful ways, both economic and civic, will increasingly depend on the caliber of their K-12 academic experiences, suggesting a need to focus on the spirit, rather than the letter, of EL education policy to prioritize equity in access and achievement for all.

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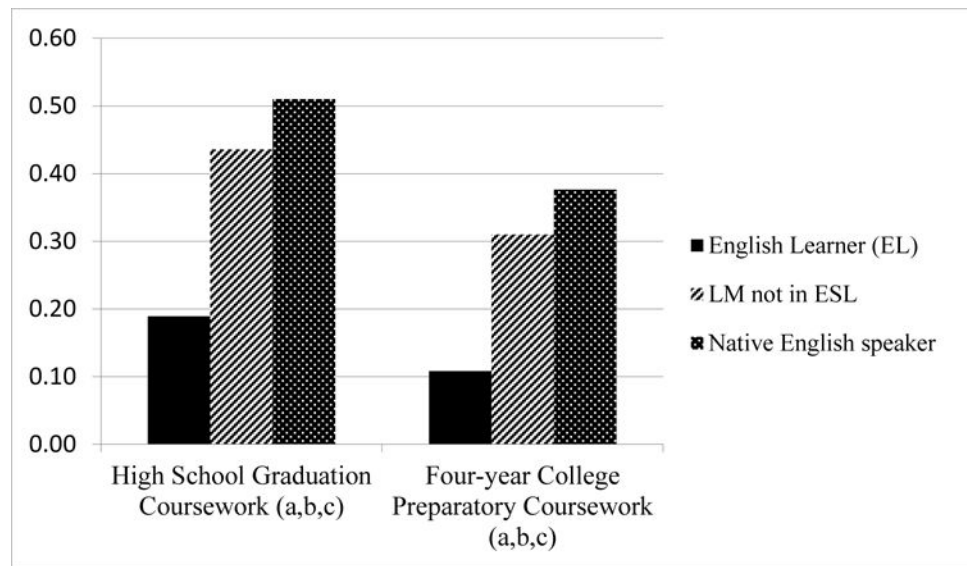


Figure 1. Weighted Proportions of Students Completing High School Graduation and College Preparatory Coursework By Mutually Exclusive Language Cohorts

a- Differences between English Learners and language minorities *not in ESL* are significant ($p < 0.001$).

b- Differences between English Learners and native English speakers are significant ($p < 0.001$).

c- Differences between language minorities *not in ESL* and native English speakers are significant ($p < 0.01$).

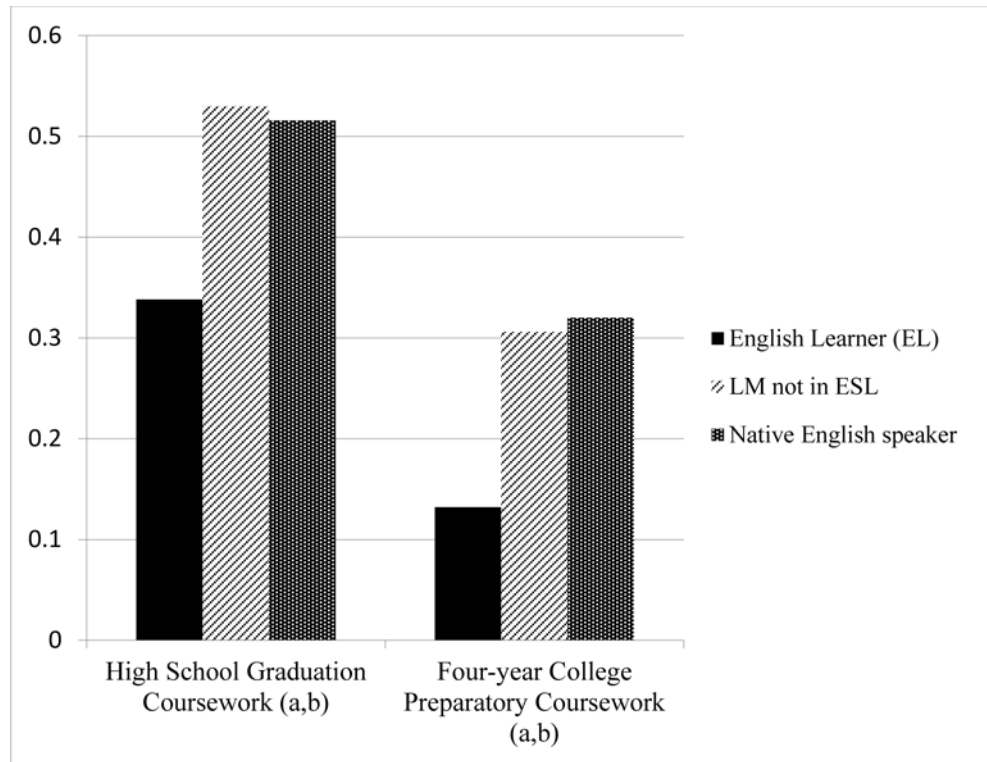


Figure 2. Predicted Probabilities of Students Completing High School Graduation and College Preparatory Coursework Net of Linguistic, Social, and Academic Characteristics By Mutually Exclusive Language Cohort

a- Differences between English Learners and language minorities *not in ESL* are significant ($p < 0.001$).

b- Differences between English Learners and native English speakers are significant ($p < 0.001$).

Table 1

Means and (Standard Deviations) by Mutually Exclusive Language Cohort

	Language Minorities		
	in ESL: English Learners	Not in ESL	Native English speakers
Students (n) [/]	750	2,600	11,570
Students (%)	0.04	0.14	0.82
Linguistic Background			
<i>Started school in U.S. in^{ab}:</i>			
Kindergarten	0.48	0.87	0.99
Between 1 st and 3 rd grade	0.06	0.05	0.01
Between 4 th and 6 th grade	0.10	0.04	0.00
Between 7 th and 8 th grade	0.14	0.02	0.00
9 th grade	0.12	0.01	0.00
10 th grade	0.09	0.00	0.00
<i>Language</i>			
10 th grader's English proficiency ^{ab}	9.65 (2.49)	11.15 (1.58)	12.00 (0.06)
How often 10 th grader speaks native language ^a	6.14 (3.89)	4.43 (3.61)	0.00 (0.10)
Parent's current English proficiency ^{ab}	6.35 (3.94)	4.89 (4.47)	11.91 (0.75)
How often parent speaks native language ^{ab}	7.38 (4.09)	9.09 (3.46)	0.27 (1.39)
Social Background			
Male ^b	0.48	0.49	0.50
<i>Race^{ab}:</i>			
White, non-Hispanic	0.19	0.29	0.70
Black, non-Hispanic	0.06	0.10	0.15
Hispanic	0.59	0.43	0.09
Asian, non-Hispanic	0.14	0.14	0.02
Other race	0.02	0.05	0.05
<i>Social class:</i>			
Parents completed BA or higher ^{ab}	0.27	0.31	0.41

	Language Minorities		
	in ESL: English Learners	Not in ESL	Native English speakers
Family income ^{ab}	7.32 (2.37)	8.29 (2.23)	9.24 (2.31)
Number of siblings ^{ab}	2.84 (1.57)	2.52 (1.45)	2.27 (1.54)
Academic Background			
Age ^{ab}	15.97 (0.73)	15.89 (0.62)	15.85 (0.62)
<i>Early high school achievement</i>			
9 th grade math ^{ab}	3.13 (1.40)	3.68 (1.37)	3.81 (1.48)
9 th grade science ^{ab}	1.83 (1.31)	2.32 (1.09)	2.44 (1.21)
9 th grade GPA in academic courses ^{ab}	2.42 (0.77)	2.53 (0.77)	2.74 (0.86)
10 th grade reading test score ^{ab}	21.12 (7.48)	25.84 (8.44)	30.94 (9.61)
<i>Expectations and other educational markers</i>			
10 th grader's educational expectations ^{ab} :			
No college	0.16	0.10	0.07
2-year college	0.16	0.13	0.11
4-year college	0.68	0.77	0.81

In order to conserve space, we omit measures of school sector, region, and urbanicity.

^l - Per NCES guidelines, unweighted frequencies are rounded to the nearest 10.

^a - Differences between English Learners (in ESL) and LM peers not in ESL are significant (at least p<0.05).

^b -Differences between English Learners (in ESL) and native English speakers are significant (at least p<0.05).

Log Odds and Standard Errors from Logistic Regression Models Predicting Completion of All High School Graduation Course Requirements

Table 2

	Model A1 Baseline		Model A1 Linguistic		Model A1 Social		Model A1 Academic	
	B	(SE)	B	(SE)	B	(SE)	B	(SE)
Intercept	-1.45	(0.17)***	-3.21	(0.38)***	-3.04	(0.41)***	-3.40	(0.93)***
Language Cohort (ref: English Learner)								
LM not in ESL	1.19	(0.17)***	1.02	(0.19)***	1.00	(0.20)***	0.79	(0.21)***
Native English speaker	1.47	(0.16)***	1.31	(0.21)***	1.20	(0.22)***	0.73	(0.23)**
Linguistic Background								
<i>Started school in U.S. in:</i>								
Kindergarten (ref)								
Between 1st and 3rd grade	0.16	(0.15)	0.07	(0.15)	0.07	(0.15)	0.02	(0.17)
Between 4th and 6th grade	0.30	(0.16) ⁺	0.16	(0.17)	0.16	(0.17)	0.03	(0.18)
Between 7th and 8th grade	0.12	(0.21)	-0.01	(0.22)	-0.01	(0.22)	-0.33	(0.25)
9th grade	0.09	(0.23)	-0.08	(0.23)	-0.08	(0.23)	-0.23	(0.24)
10th grade	-0.58	(0.32) ⁺	-0.86	(0.35)*	-0.86	(0.35)*	-1.12	(0.42)**
<i>Language</i>								
10th grader's English proficiency	0.07	(0.03)**	0.07	(0.03)**	0.07	(0.03)**	0.02	(0.03)
How often 10th grader speaks native language	0.03	(0.01) ⁺	0.04	(0.02)**	0.04	(0.02)**	0.03	(0.02)
Current English proficiency of parent	0.09	(0.02)***	0.01	(0.02)	0.01	(0.02)	0.01	(0.02)
How often parent speaks native language	0.04	(0.01)**	0.03	(0.01)*	0.03	(0.01)*	0.00	(0.01)
Social Back ground								
Male			-0.26	(0.04)***	-0.26	(0.04)***	-0.04	(0.05)
<i>Race (ref: White, non-Hispanic)</i>								
Black, non-Hispanic			0.16	(0.09) ⁺	0.16	(0.09) ⁺	0.05	(0.10)
Hispanic			-0.51	(0.10)***	-0.51	(0.10)***	-0.15	(0.12)
Asian, non-Hispanic			0.30	(0.12)*	0.30	(0.12)*	0.48	(0.14)**
Other race			-0.41	(0.11)***	-0.41	(0.11)***	-0.11	(0.12)

	Model A1 Baseline	Model A1 Linguistic	Model A1 Social	Model A1 Academic
	B	(SE)	B	(SE)
<i>Social class:</i>				
Parents completed BA or higher	0.34	(0.06)***	0.13	(0.06)*
Family income	0.06	(0.01)***	0.00	(0.01)
Number of siblings	-0.08	(0.01)***	-0.03	(0.01) [†]
Academic Background				
Age			-0.01	(0.05)
<i>Academic and cognitive history:</i>				
Ever retained (Held back a grade)			0.00	(0.07)
Ever in remedial math			0.00	(0.12)
Ever in remedial English			-0.03	(0.13)
<i>Early high school achievement:</i>				
9th grade GPA in core courses			0.47	(0.06)***
10th grade reading test score			0.01	(0.00)**
10th grader's educational expectations			0.08	(0.02)***
<i>Expectations and other educational markers</i>				
Others expecting 10th grader to attend college			0.05	(0.02)*
Dropped out after the 10th grade			-3.78	(0.37)***
Held back a grade after the 10th grade			-1.52	(0.27)***
BIC	20600000	20530000	19810000	15830000

Note: Each model estimated with approximately 14,920 students in over 740 schools.

Note:

[†] p < 0.10,

* p < 0.05,

** p < 0.01,

*** p < 0.00

Log Odds and Standard Errors from Logistic Regression Models Predicting Completion of All 4-Year College Preparatory Courses

Table 3

	Model B1 Baseline		Model B2 Linguistic		Model B3 Social		Model B4 Academic	
	B	(SE)	B	(SE)	B	(SE)	B	(SE)
Intercept	-2.10	(0.18)***	-4.23	(0.39)***	-4.51	(0.44)***	-5.22	(1.03)***
Language Cohort (ref: English Learner)								
LM not in ESL	1.32	(0.18)***	1.31	(0.18)***	1.29	(0.19)***	1.06	(0.22)***
Native English speaker	1.60	(0.17)***	1.81	(0.19)***	1.72	(0.21)***	1.13	(0.24)***
Linguistic Background								
<i>Started school in U.S. in:</i>								
Kindergarten (ref)	-		-		-		-	
Between 1st and 3rd grade	0.07	(0.16)	0.07	(0.16)	-0.03	(0.16)	-0.13	(0.18)
Between 4th and 6th grade	0.28	(0.17) ⁺	0.28	(0.17) ⁺	0.10	(0.19)	0.01	(0.22)
Between 7th and 8th grade	0.24	(0.22)	0.24	(0.22)	0.11	(0.25)	-0.09	(0.28)
9th grade	0.38	(0.23) ⁺	0.38	(0.23) ⁺	0.26	(0.24)	0.23	(0.28)
10th grade	-0.34	(0.35)	-0.34	(0.35)	-0.59	(0.42)	-0.72	(0.49)
<i>Language:</i>								
10th grader's English proficiency	0.06	(0.03) [*]	0.06	(0.03) [*]	0.05	(0.03) ⁺	-0.03	(0.03)
How often 10th grader speaks native language	0.04	(0.02) [*]	0.04	(0.02) [*]	0.05	(0.02) ^{**}	0.03	(0.02)
Current English proficiency of parent	0.10	(0.02)***	0.10	(0.02)***	0.00	(0.02)	0.00	(0.02)
How often parent speaks native language	0.08	(0.01)***	0.08	(0.01)***	0.05	(0.01)***	0.01	(0.02)
Social Background								
Male	-0.31	(0.05)***	-0.31	(0.05)***	-0.31	(0.05)***	0.03	(0.05)
<i>Race (ref: White, non-Hispanic)</i>								
Black, non-Hispanic	-0.07	(0.09)	-0.07	(0.09)	-0.07	(0.09)	0.08	(0.12)
Hispanic	-0.34	(0.10)**	-0.34	(0.10)**	-0.34	(0.10)**	0.14	(0.12)
Asian, non-Hispanic	0.47	(0.12)***	0.47	(0.12)***	0.47	(0.12)***	0.60	(0.15)***
Other race	-0.38	(0.12)**	-0.38	(0.12)**	-0.38	(0.12)**	0.01	(0.14)

	Model B1 Baseline	Model B2 Linguistic	Model B3 Social	Model B4 Academic
	B	(SE)	B	(SE)
<i>Social class:</i>				
Parents completed BA or higher			0.48	(0.06)***
Family income			0.12	(0.01)***
Number of siblings			-0.09	(0.01)***
Academic Background				
Age			-0.04	(0.05)
<i>Academic and cognitive history</i>				
Ever retained grade			-0.19	(0.09)*
Ever in remedial math			-0.06	(0.12)
Ever in remedial English			0.02	(0.14)
<i>Early high school achievement</i>				
9th grade GPA in core courses			0.71	(0.06)***
10th grade reading test score			0.02	(0.00)***
<i>Expectations and other educational markers</i>				
10th grader's educational expectations			0.15	(0.02)***
Others expecting college for 10th grader			0.09	(0.02)***
Dropped out after the 10th grade			-4.74	(0.81)***
Held back a grade after the 10th grade			-1.08	(0.38)**
<hr/>				
BIC	19360000	19260000	18090000	13660000

Note: Each model estimated with approximately 14,920 students in over 740 schools.

Note:

+ p < 0.10,

* p < 0.05,

** p < 0.01,

*** p < 0.001