Ever-English Learners' K-16 Trajectories:

Evidence from Texas[*]

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Abstract:

Purpose. Ever-ELs comprise the fastest growing K-12 student population, accounting for one in ten students nationally, and at minimum one in five students in large states like Texas and California. Most of what we know about their college-entrance patterns, however, focuses on youth who were EL-identified during high school, not those who may have exited ELD services previously.

Research Methods/ Approaches. In the present study, we use multilevel models and statewide administrative K-12 and higher education longitudinal data to examine how ever-EL status predicts five outcomes: high school graduation, application to a four-year college, any college enrollment, and level of college attended.

Findings. We show that, descriptively, ever-EL students differ significantly from their non-EL peers on a wide range of student and school characteristics, necessitating models that account for the many covariates of college going. Our models show that ever-EL status is associated with a greater likelihood of graduating from high school. Among high school graduates, ever-ELs are significantly more likely to enroll in college within three years of high school graduation than non-ELs; however, this is because they are significantly more likely to attend a two-year college and less likely to attend a four-year institution.

Implications. In many ways, high schools perform the task asked of them—graduating EL students. However, given the increasing economic importance of a postsecondary credential in the labor market, ever-EL students remain underserved by Texas schools. We close with recommendations for policy and practice.

Key Words: Ever-EL, high school graduation, college enrollment, two-year, four-year

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Introduction

In the U.S. context, a postsecondary credential is increasingly essential for entry into the professional sphere and securing high-quality employment (Pellegrino, et al., 2013; Schudde and Bernell 2019), yet preparation for and enrollment in college remain largely stratified by a variety of student characteristics (Black, Cortes, and Lincove 2020; NCES 2016). In the current study, we use linguistic status to explore the postsecondary outcomes of the fastest growing population in U.S. schools, English learner (EL) students (Batalova and McHugh 2010). EL students are the subset of bilingual youth identified by their schools as needing English language development (ELD) services (Lopez, Pooler, and Linquanti 2016). In Fall of 2019, EL students comprised 10 percent of the K-12 public school population nationally and nearly 20 percent in states like Texas, California, and New Mexico.[1] These counts, however, capture only those students who were identified as EL at the time of data collection, missing those who were previously EL-identified yet no longer receive services.

In Texas, the second most populous state in the nation behind California, we estimate that a quarter of K-12 public school students were EL-identified for at least part of their K-12 career.[2] K-12 educational experiences are, on average, the strongest predictors of postsecondary outcomes, including college application, attendance, achievement, and degree attainment (E.g., Bowen, Chingos, and McPherson 2009; Perna 2000; Jackson 2010; Villarreal 2018). Unpacking the association between ever-EL status—having received ELD services at some point during K-12 (Thompson, Umansky, and Rew 2022)—and high school graduation and college matriculation can offer essential insights for strengthening educational and economic attainment

[1] https://www.migrationpolicy.org/programs/data-hub/charts/english-learners-k-12-education-state
[2] Authors' estimates, Texas Education Agency [TEA] data.

in the state and beyond.

Due to both data limitations and the transient nature of EL status, prior research often focuses on 'current' EL students, making it hard to know what, if any, role ever being identified for and placed in ELD services plays in students' educational pathways (Rodriguez and Cruz 2009; Callahan, Jiang, and Núñez 2022; Núñez et al. 2016). Most studies that address EL students' college going examine the postsecondary outcomes of those who are EL-identified at the time of data collection, most often during high school (Kanno 2018; Kanno and Cromley 2015), making it difficult to generalize findings to the larger population of current *and former* EL students.

In the present study, we use data from Texas, which educates 11 percent of the nation's school children (NCES 2021), to describe the demographics, course-taking behaviors, and other academic experiences of over 400,000 students enrolled in Texas public schools from kindergarten on. We then use multilevel models to estimate the association between students' linguistic status and their postsecondary outcomes, including high school graduation, college application, college enrollment, and college type, while controlling for students' background, academic experiences, and high school attended. By comparing both current and former ELs—a combined group we refer to as *ever-ELs* (Kieffer and Thompson 2018; Thompson, Umansky, and Rew 2022)—to their non-EL peers, we are better able to explore how EL status shapes the kindergarten to college educational pipeline.

Review of the Literature: College-going Outcomes and EL Students, What We Know Now

In this section, we reflect upon and synthesize prior research that examines students' EL status with respect to their college-going behaviors. We describe how data constraints inform what we know about the link between EL status and students' college-going outcomes (Kieffer and Thompson 2018; Saunders and Marcelletti 2013). We then explore how student achievement and school-level factors inform college going relative to linguistic status. In doing so, we illuminate how extant data—and their limitations—shape the literature on EL students' longitudinal outcomes, and how our present inquiry might address some of these empirical limitations.

Capturing EL Achievement K-16: Constraints and Affordances of the Data

EL achievement research has typically captured students at one point in their K-12 career (i.e., studies using NAEP data: López, McEneaney, and Nieswandt 2015; Kieffer and Thompson 2018), or during a bounded period of their schooling (i.e., high school: Kanno and Cromley 2015; Kanno and Kangas 2014; Callahan, Wilkinson, and Muller 2010). We argue that studies that rely on current EL status, sometimes including former ELs in the reference group likely paint a limited, if not skewed, understanding of EL students. This approach fails to account for the achievement and growth of ever-EL students who were at some point reclassified and exited from EL status (Kieffer and Thompson 2018; Saunders and Marcelletti 2013). Alternatively, research that focuses solely on EL students who exited EL status results in a 'creaming' effect, focused the most proficient and highest performing bilingual youth (Scott et al. 2009) and omitting the experiences of those who may not have been exited from ELD services due to their English proficiency, academic performance, or any number of extraneous factors (Estrada and Wang 2018; Thompson 2015). In addition, synthesizing the research on EL students' college going, Núñez and colleagues (2016) described how data availability has shaped the questions scholars can pose and answer regarding EL college going, leading many higher education scholars to approximate prior EL status among college students using measures such as home language or nativity, rather than K-12 EL placement and services.

EL Students' K-12 Academic Experiences

To understand *why* disparate college-going patterns persist, researchers illustrate how institutional and organizational processes set in place to ensure EL students' linguistic development frequently limit their access to the rigorous academic experiences required for college going (Mendoza 2019; Kanno 2021, 2018). This work builds on decades of research examining *how* EL status relates to the quality and quantity of students' core academic exposure, particularly through access to college-preparatory courses during high school (NASEM 2018). Not only have scholars found that high school EL status is associated with overrepresentation in low-track courses and underrepresentation in college preparatory, honors, and AP classes (Robinson-Cimpian, Thompson, and Umansky 2016) but high school ESL placement also appears to preclude students' access to college-preparatory coursework (Callahan, Wilkinson, and Muller 2010; Thompson 2015). In addition, secondary EL students are systematically placed into both below-grade-level and non-academic coursework (Umansky 2016; Estrada 2014), limiting their academic preparation in important ways. Beginning in the elementary grades, EL students are more likely to be in classes that school staff describe as offering limited opportunities for learning (Estrada, Wang, and Farkas 2020). Again, however, these studies examine the experiences of students *currently* EL-identified, making it difficult to capture the extent to which *ever* being EL-identified shapes college going across the whole of students' K-12 experiences.

Recently, Johnson (2019) employed K-12 longitudinal student data from one California district and found the timing of exiting EL students from EL status (reclassification) informed their postsecondary outcomes. Specifically, she found that being reclassified prior to the middle school (after 5th grade) had a significantly higher probability of on-time high school graduation relative to their peers who did not reclassify, although students who remained EL at the end of 8th grade, but who ultimately enrolled in college, were more likely to start at a four-year institution and do so full time compared to their peers who were reclassified (Johnson 2019). In the present study, we are able to account for a wide range of student and school characteristics also understood to inform postsecondary outcomes.

College Going, School Context, and Students' EL Status

Where students attend high school also shapes their preparation for college and other postsecondary pursuits (Niu and Tienda 2013). Disentangling the role of school context in college going is critical as students' background characteristics are often associated with the high school they attend (Grodsky and Riegle-Crumb 2010; Frost 2007), and not surprisingly, residential segregation shapes access to high quality high school education (Lareau and Goyette 2014). To this end, Cha (2015) found that on top of existing racial and ethnic disparities in access to high level math coursework, students who attended low-income high schools were significantly less likely to complete advanced math courses, a necessary precursor of college going. In addition, the socioeconomic composition of their high school also predicts whether students enroll in a two- or a four-year postsecondary institution (Engberg and Wolniak 2014). For ever-ELs and other minoritized students, these findings are complicated by their greater likelihood of attending segregated, low-income schools (Palardy, Rumberger, and Butler 2015). The district a student attends is associated with their time in ELD services—specifically, their risk of long-term EL status, a status linked with relatively low academic achievement and attainment (Strong and Escamilla 2023). In addition, research examining college-preparatory course taking among immigrant-origin high school students suggests that school composition mediates the estimated effect of ESL placement (Callahan et al. 2009; Callahan, Wilkinson, and

Muller 2008). To fully understand EL college going, we must account for indicators of school quality and contexts.

College-Going, Academic Preparation, and ELs: Gaps in the Literature

Ultimately, the strongest predictor of students' college-going is their high school academic preparation, particularly course taking and academic achievement (Adelman 2006; Long, Conger, and Iatarola 2012). Controlling for a myriad social and academic covariates, Long and colleagues (2012) identified a significant, positive association between rigorous coursework and college-going, with students from historically underrepresented groups benefitting more from advanced course taking than their non-minoritized peers. While conventional wisdom might suggest that preparation for college rests on individuals' selection into rigorous coursework, racial, ethnic, linguistic, and economic disparities in advanced course taking suggest that the patterns are shaped by structural inequities rather than individual preferences (Palardy, Rumberger, and Butler 2015; Muller et al. 2010; Mosqueda et al. 2022). Disparities in access to rigorous and required college preparation pathways pose a threat to the economic future of an increasingly diverse society.

Although EL students belong primarily to racially, ethnically, and linguistically marginalized groups (Irwin et al. 2021), most research documenting racial/ethnic patterns in college going does not account for the effects of EL status, initial or current. Using nationally representative survey data, Kanno and Cromley (2013) found persistent disparities in students' college going by linguistic status: notably, only 12% of high school EL students, compared to 32% of monolingual English speakers and 25% of English proficient bilinguals ultimately earned a bachelor's degree. Likewise, in a study examining the potential immigrant advantage on college going, Callahan and Humphries (2016) found that among immigrant-origin youth, those placed in ESL during high school were less likely to enroll in college and, when they did, they were more likely to enroll in a two-year rather than a four-year institution, net of multiple correlates to college going. Alternately, scholars have examined the college-going outcomes of the broader group of bilingual college students, many of whom arrived in in the U.S. during young adulthood (Kanno and Harklau 2012; Santibañez and Zarate 2014; Kanno and Varghese 2010). We know significantly less about the postsecondary participation of EL students who began—and completed—their education in our K-12 schools but were no longer EL-identified in high school; our study focuses on the overarching role of EL status net of other important postsecondary indicators.

Research Questions

To help explore how linguistic status is associated with end of high school and college-going outcomes, we compare kindergarten-identified ELs (*ever-ELs)* and those who were not identified for ELD services (non-ELs) over time. Using statewide longitudinal data, we pose the following research questions:

1. How do ever-EL students' background characteristics and academic experiences, including college preparation, and high school context, differ from those of their non-EL peers?
2. How does ever-EL status during K-12 predict students' high school graduation, college application and enrollment, and college type, net of both student and school characteristics?

Methods

To answer our research questions, we used statewide administrative data provided through a restricted-use agreement with the Texas Education Research Center (ERC), a research center and data clearinghouse at the University of Texas at Austin. We track students from kindergarten into college, attentive to the factors identified in the literature as levers of postsecondary access. We used descriptive statistics to answer RQ1 and were particularly interested in students' access to college preparatory coursework by linguistic status. To address RQ2, we developed a series of comprehensive, multilevel statistical models to examine predictors of high school graduation, application to four-year colleges, enrollment in college, and level of college attended.

Data

We used student-level K-12 data collected by the Texas Education Agency (TEA) and higher education data collected by the Texas Higher Education Coordinating Board (THECB) to develop a longitudinal data set that follows Texas students from K-12 schooling into college. In response to federal guidelines regarding educational access (i.e., Castañeda v. Pickard 1981; ESSA, 2015), researchers have long labored to understand the nuances to measuring EL achievement and determining which students belong in the EL subgroup (Robinson-Cimpian, Thompson, and Umansky 2016). Compared with other data in which only currently EL-identified students are captured as ELs, longitudinal population-level data with recurrent, annual indicators of EL status allow us to capture students who were EL-identified upon entry into the school system, but who were later exited from EL status. We can then consider end-of-high-school and college-going outcomes for students who were first EL-identified in kindergarten and are either current or former ELs at the end of high school—a group we refer to as *ever-ELs.*

Analytic Sample

Our analytic sample captures students who entered kindergarten in Texas in 1999 and 2000 (pooled) (N = 525,762). This focal sample allowed us to explore the relationship between ever-EL status and our outcomes of interest, high school graduation and college application and enrollment. Using the fall 1999 and 2000 entering cohorts enabled us to follow students for three years after high school graduation. The data offer an analytic window similar to that of national datasets collected by the National Center for Education Statistics (NCES); however, we have two distinct advantages, access to population-level data for the entire state of Texas, and the ability to identify ever-EL status, a limitation of NCES datasets that include postsecondary data.

From the pooled kindergarten cohorts (N = 525,762), we restricted our sample to kindergarteners who were younger than 21 by the end of high school (N = 525,292) and who enrolled in ninth grade in Texas (N = 478,375) to ensure adequate background information for statistical controls in our multilevel models (e.g., course taking milestones, state standardized test scores, and school characteristics). We then removed students who transferred to another state before graduation (N = 36,079), as well as those who were missing course-taking data (N = 5,696), testing data (N = 14,491), and high school data (N = 7,481), resulting in a final analytic sample of 414,628 students.

Description of Variables

To capture student experiences in K-12, we used attendance and demographic data, course enrollment and completion records, and test scores from the TEA, along with school characteristics obtained from the Public Education Information Management System (PEIMS). To capture college application and enrollment information, we used student application and college enrollment files obtained from the THECB. We include Appendix A, for reference, in which we provide definitions, data sources, and descriptive statistics for all variables included in our main analyses.

Independent Variable of Interest

Our independent variable of interest is *ever-EL status*, which determines whether or not students were identified in kindergarten to receive English language development (ELD) services from a Texas school. We created an indicator of ever-EL status using measures of: (1) school system EL-identification (identified with Limited English Proficiency (LEP), i.e., EL); and (2) ELD services (enrollment in bilingual or ESL programs for EL-identified students) obtained from the TEA enrollment and attendance files. Of the total sample of 414,628 students who entered kindergarten in either 1999 or 2000, just over one in five (23%) students were ever-EL-identified in their kindergarten year; their counterparts, non-EL students, comprise the remaining 77 percent of the analytic sample. We choose to focus on kindergarten identification as federal policy requires non-native English speakers (language minority) students to be tested to determine EL status within 30 days of initial school enrollment.[3] However, we acknowledge this is an imperfect measure; it is possible some students in our data may not have been EL-identified in kindergarten, as federal and state policies mandate, but instead at a later point in time.

Control Variables

Demographics

We also captured student demographic characteristics, including gender, race/ethnicity, home language, and a measure of economic disadvantage (eligibility for free or reduced-price lunch). While we present home language in the descriptive table to show variation in the analytic sample, it is not part of the analytic models due to its collinearity with race/ethnicity.

K-12 Academic Experiences

[3] The federal "No Child Left Behind" Act (NCLB). *Pub. L. 107-110.* (2001), and "Every Student Succeeds" Act (ESSA) *Pub. L 114-95.* (2015) both require EL identification within 30 days of initial enrollment. These guidelines were subsequently adopted, see Texas Education Code (TEC) Chapter 29, as a requirement for testing within four weeks of initial enrollment.

Measures of academic experiences included indicators of whether a student ever received special education services or was ever retained, their performance on 9th grade state assessments in math and reading, the number of math courses higher than Algebra II, and the number of dual enrollment courses they completed.

School Context

Leveraging campus identifiers from the TEA's attendance data, we captured the last high school campus students attended and merged the TEA data with data from the PEIMS, which allowed us to capture school-campus-level variables (i.e., percentage of English Learner students, percentage of White students, percentage of special education students, percentage of students taking advanced courses, percentage of teachers with 5 or fewer years of experience, and distance to the nearest four-year institution of higher education).

Dependent Variables

We focus our analyses on five (5) outcome measures in the educational pipeline designed to capture the transition from high school to college.

End-of-high-school Outcomes

Immediately after high school, outcomes of interest include: (1) high school graduation and (2) application to a public four-year university. We used dichotomous indicators to identify high school graduates as students with a graduation record and application to a public four-year university if the student had application data provided by the TEA. We limited applications to those who applied within three years of their high school graduation.

College Enrollment Outcomes

Among the sample of high school graduates, we then proceeded to define and focus on the following three college-enrollment outcomes within three years of high school graduation:

(1) any college enrollment, (2) enrollment in a four-year institution, and (3) enrollment in a two-year institution. We used dichotomous indicators for each outcome and identified students using THECB enrollment data.

Analytic Strategy

To address RQ1, we relied on descriptive statistics to compare the backgrounds and academic exposure and experiences of ever-EL and non-EL students. In turn, to address RQ2, we employed multilevel mixed-effects logistic regression models to account for the nesting of students in school campuses and to allow for estimating binary outcomes. Initially, we used the following two-level model to predict our five dichotomous outcomes:

$$logit(Y_{ij}) = \beta_0 + \beta_1 X_{ij} + \beta_2 X_j + \gamma_j$$

In the equation, the outcome Y_{ij} is a dichotomous indicator of whether student i in high school j achieved a specific educational outcome (e.g., graduating high school, applying to a university). $\beta_1 X_{ij}$ is a vector of all student-level variables, including our key independent variable of interest, Ever-EL status, $\beta_2 X_j$ is a vector of all school-level variables, and γ_j is the random effect of schools.

We first performed an unconditional mean model, an empty model with only school IDs at level 2 and calculated the intraclass correlation coefficient (ICC) to determine the variation of the outcome across campuses. As we took this step to establish whether multilevel modeling was an appropriate methodological approach, no individual characteristics were included. Results confirmed the need for multilevel modeling. These preliminary results also suggested that the high school a student attended explained a considerable amount of the overall variation in the target postsecondary outcomes, with high school last attended explaining between six- and 44%

of the variation in outcomes (enrollment in a two-year institution and high school graduation, respectively).

We then ran preliminary analyses to assess model fit, leveraging a host of student- and school-level variables specified in the literature as predictors of our outcomes after first checking for correlation to protect against multicollinearity in our models. Although we originally tested models including additional key variables at the student level (i.e., number of AP or IB courses, students' home language) and at the school level (i.e., percentage of economically disadvantaged students, distance to the nearest two-year college), ultimately, we omitted these variables from our final models due to multicollinearity.

At the student level, we found that the number of AP/IB courses a student took was highly and positively correlated with the number of math courses completed beyond Algebra-II, which appeared to be a stronger predictor of the outcomes of interest (especially high school graduation and college application). Most notably, however, among our analytic sample, we found that 99% of students who spoke Spanish as a home language identified as Hispanic/Latino; in order to account for students' race/ethnicity, we eliminated student home language.

We present the variables included in our preferred model specification in Appendix A, where our final models include student demographic characteristics (e.g., English learner status, gender, race/ethnicity) and indicators of academic exposure and experiences (e.g., special education status, grade retention, number of dual enrollment courses) at the first level, and campus-level variables—including percent of English Learners, percent of White students, percent in AP or IB coursework, percent of teachers with 5 or fewer years of experience, distance to four-year college, and an indicator of whether the school is a charter school—at the second level. We used school ID to group students by final high school attended. Including school measures allows us to capture variation at the school level at a time in the life course when peers and the school context may matter more than other factors (Muller 2015). Unlike a fixed effects approach, using a mixed-effects multilevel model helps us understand how much of the variation in a given outcome is explained by the high school students attended (compared with the variation explained by individual-level variables).

Results

Variation by Linguistic Status

We now turn our attention to our empirical focus, beginning with RQ1, *How do ever-EL students' background characteristics and academic experiences, including college preparation, differ from those of their non-EL peers?* We include Table 1 (below) to show how students' individual background, academic experiences, and high school contexts vary by students' linguistic status.

<<INSERT TABLE 1 ABOUT HERE>>

Student Characteristics

We find a variety of demographic differences across the two student groups. As shown in the first panel of Table 1, about half of ever-EL students were female and nearly all identified as Hispanic (93%), with Asians comprising the next largest subgroup of ever-EL students (5.7%). Notably, 93 percent of ever-EL students also spoke Spanish at home, reflecting the prevalence of Spanish as a home language in Texas households. To compare, although about half of non-EL students were female, most identified as non-Hispanic White (48.9%) or Hispanic (31.2%) and spoke primarily English at home (94%). At this point, it is important to note that not all students who speak a language other than English in the home are identified as needing ELD services and support upon entry into the K-12 school system (Lopez, Pooler, and Linquanti 2016). Finally, while the majority of ever-ELs (85%) were eligible for free or reduced-price lunch for at least one year during their K-12 tenure, just over half (58%) of their non-EL peers met the same eligibility criteria.

Academic Experiences

Moving to the middle panel of Table 1, we found variation in students' academic experiences by linguistic status. Ever-ELs were less often identified for special education services relative to their non-EL classmates (16% versus 22%) but more often repeated at least one grade during K-12 than non-ELs (29% and 20%, respectively). This pattern aligns with prior research that EL students appear to be under-identified for special education services (M. Murphy and Johnson 2020), especially in the early elementary grades as educators wait to determine if any learning issues might be resolved with ELD (Hibel and Jasper 2012). At the high school level, both groups show similar patterns in absenteeism, each group missing on average five percent of school days in grade nine. Likewise, both groups attended on average 1.3 high schools.

Academic exposure through course placement comes into greater focus at the secondary level. Non-ELs experienced richer and more advanced academic exposure. Not only did ever-ELs fail more courses than non-ELs, but they also completed fewer math courses beyond Algebra II and fewer dual-enrollment courses (courses that count toward both high school and college) than their non-EL peers. On average, ever-ELs also scored lower on the 9th grade state assessment exam, TAKS, in both Reading and Math. Ultimately, ever-ELs experienced less rigorous academic exposure than non-ELs and, not surprisingly, their academic outcomes also appear lower.

High School Context

We move now to the high schools Texas students attend, contexts that research has long found to shape whether and how students are prepared to think about college and college going (Jarsky, McDonough, and Núñez 2009; Niu and Tienda 2013; Long, Sáenz, and Tienda 2010). The bottom panel of Table 1 shows how the high schools attended differed in notable ways by students' linguistic status. Non-ELs attended high schools with larger proportions of White students; on average 38 percent of their student body identified as white. In contrast, ever-ELs attended high schools where the share of White peers was less than half that (15%). In addition, ever-ELs attended high schools in which one in ten students was EL-identified, while non-ELs attended schools where only one in 20 students were EL-identified[4]. Interestingly, neither the share of students identified for special education services (9.2% and 9.7%), nor the share enrolled in advanced course taking (30% and 29%) differed notably by linguistic status.

That said, ever-ELs also attended high schools in which a higher share of the teachers had been teaching for 5 years or less (35% v. 31%), which aligns with prior research illustrating that the distribution of novice teachers tends to disadvantage minoritized student populations (Clotfelter, Ladd, and Vigdor 2005) and hinder their achievement (Clotfelter, Ladd, and Vigdor 2007). In addition, ever-ELs were more likely to attend charter schools and high schools that were located further from a four-year college than their non-EL peers. Recognizing differences in high school contexts allows us to begin to understand the differences in social and academic exposure associated with linguistic status.

Now, with a sense of students' individual, academic, and school characteristics we turn to their early postsecondary outcomes. The bottom-most panel of Table 1 displays students' postsecondary outcomes, beginning with high school graduation, by linguistic status. Although

[4] Technically, this variable measures the percent of students identified with limited English proficiency (LEP), the state's former term for EL status.

ever-ELs and non-ELs demonstrate relatively similar high school graduation rates (90% and 91%, respectively), their trajectories quickly diverge. The four-year college application rate is lower for ever-ELs (22%) than their non-EL peers (2%). In addition, among ever-EL students who enrolled in college within three years of high school graduation, 68% entered a two-year college and 32% a four-year institution. In contrast, among non-EL college goers, only 60% entered a two-year institution and 40% a four-year college or university. These bivariate trends in postsecondary application and enrollment portend very different academic and professional trajectories over time.

Linguistic Status and College Going

We turn now to our models designed to isolate the relationship between ever-EL status and college going. Specifically, in RQ2 we ask, *How does ever-EL status predict youths' high school graduation, college application and enrollment, and college type, controlling for variation in student and school characteristics?* Table 2 shows results from multilevel, multivariate models predicting students' end of high school outcomes – graduating from high school and applying to a four-year college.

Graduating from High School and Applying to College

Results from Table 2 column 1 show ever-EL students' odds of graduating from high school are 17.7% greater than their non-EL peers' (OR=1.172, SE=0.025, p <0.00001), once we account for demographic, academic, and school variables. Table 2, column 2 shows results from a multilevel logistic regression model predicting application to a four-year institution. After controlling for all covariates, we found no statistical difference between ever-EL and non-EL students' odds of applying to a four-year college.

<<INSERT TABLE 2 ABOUT HERE>>

College Enrollment Outcomes within Three Years of Graduation

We next explored college enrollment outcomes up to three years after high school graduation. Table 3 presents results from multilevel models predicting high school graduates' likelihood of postsecondary enrollment and of enrolling in a two- or a four-year institution. In column 1, we show that after accounting for students' demographic, academic, and school characteristics, the odds of ever-EL students enrolling in any college within three years of high school graduation are 12% higher than the odds of enrolling in any college for their non-EL peers (OR=1.115, SE=0.013, p <0.00001). However, further exploration suggests that this advantage is not evenly distributed over college type: two-year and four-year. After controlling on the full range of individual student and school characteristics, results in column 2 show the odds of ever-EL students' enrollment in a four-year institution within three years of high school graduation are 17% lower than the odds for non-ELs (OR=0.832, SE=0.012, p <0.00001). In contrast, coefficients in column 3 show that ever-EL students are more likely to enroll in a two-year college within three years of high school graduation than non-ELs. Specifically, the odds of ever-EL students enrolling in a two-year college are over 20% higher than they are for non-ELs (OR=1.209, SE=0.013, p<0.00001).

<<INSERT TABLE 3 ABOUT HERE>>

Overall, after accounting for students' demographic characteristics, academic experiences, and their high school context in our multilevel models, we found that ever-EL students in Texas are more likely to graduate from high school and enroll in a two-year college within three years of high school graduation. Despite their perceived advantage(s) in high school graduation and postsecondary enrollment, ever-ELs are significantly less likely than their non-

EL peers to enroll in a four-year institution within three years of graduation, suggesting different postsecondary trajectories and potential labor market opportunities.

Discussion and Conclusions

Our findings suggest that while ever-EL students are adequately prepared to graduate from high school and even apply to a four-year college; they are more likely to attend college than their non-EL peers, but the majority of their college going occurs through community colleges. Ever-EL students do not enroll at four-year colleges and universities at the same rate as their non-EL peers, despite applying at an equal rate. In some ways, our analyses capturing the postsecondary outcomes of ever-EL students challenge conventional wisdom regarding EL student achievement and attainment (Garcia 2015). For example, scholars have long expressed concern about EL students' seemingly low high school graduation rate (Sugarman 2021; Zaff et al. 2020)—and alternately, their greater likelihood of dropping out of high school (Slama et al. 2015; Callahan 2013) relative to their peers. As our models use longitudinal student-level data that capture the experiences of those ELs who exited EL status sometime during their K-12 career alongside their peers who remained EL-identified during high school, we are able to set to rest those specific concerns for Texas students. However, the disparities in college enrollment we observe suggest that there may be systemic and/or structural barriers to enrollment at a four-year college, which offers a direct route to a bachelor's degree, or some incentives for ever-ELs to enroll at public two-year colleges that require additional inquiry.

Prior research has found that while EL-identified high school students are often prepared to graduate, they are rarely placed in the courses that would allow them the to enroll in a baccalaureate-granting institution (Callahan and Shifrer 2016). Our results further confirm that, compared with non-ELs, ever-ELs are less likely to complete advanced math and dual-enrollment courses, both of which would help prepare them for college and may offer an edge for admission at four-year institutions (in the case of dual enrollment, those courses also allow students to accrue college credits). Scholars have cautioned against a hyper-focus on graduating EL students from high school at the expense of preparing them either for college or a career (Kanno 2021, 2018; Callahan and Gándara 2004). It is possible that this focus ultimately contributes to the underrepresentation of ever-ELs at four-year institutions, where advanced course taking may improve the odds of admission, and overrepresentation at community colleges, which tend to be broader access.

Prior research focused on a subset of students who were EL-identified during high school found them not only less likely to graduate high school but also less likely to enroll in college—especially in a four-year institution—than their non-EL peers (Kanno and Cromley 2013, 2015). Our results suggest that, when capturing the full population of ever-ELs including both current- and former-ELs, ever-ELs are more likely to graduate high school and attend college, but the higher college attendance is driven by entrance into two-year colleges. While some may view the ever-EL population as a niche group—nationally, EL students account for only one in ten students and more than one in five Texans, suggesting that a fairly high share of Texas high school students will be more likely to enroll in a two-year college than a four-year college.

Implications

Considerations for Future Research

Our results suggest variation in the level of college ever-EL students and non-EL students attend, despite similar patterns (controlling for student background) in applying to four-year institutions. Additional research about processes that shape college going behaviors like college choice, including relationships with counselors, mentoring programs, and academic advising (all unobservable in state administrative data sets), may allow us to better understand how schools shape ever-EL students' college trajectories. Similarly, future analyses could examine whether key high school experiences vary in how they shape students' postsecondary outcomes by linguistic status.

Our current study explored initial postsecondary enrollment, but additional research is necessary to understand whether and how postsecondary pathways for ever-EL and non-EL students differ, including postsecondary experiences and degree attainment. Future research should further explore the levers shaping ever-EL students' postsecondary pathways. As we build a better understanding of the specific factors that may move the needle "more" for ELs, those findings may inform changes in policy and practice to reduce, if not close, the opportunity gap.

Implications for Policy and Practice

Ultimately, our findings point to one of the most pressing challenges currently facing U.S. high schools: the tension between preparing students to graduate and preparing them for postsecondary success, either in higher education or in the workforce. Prior research suggests that high schools struggle to successfully prepare EL students for either postsecondary outcome (Santos et al. 2018; Kanno 2021). Although our models cannot speak to participants' vocational/ technical skills, they do illuminate the disconnect between ever-ELs' four-year college application rate and their actual enrollment, suggesting a missed opportunity. In an effort to grapple with why this opportunity gap exists and persists, we take a moment to consider ways that educational policies and practice might minimize, if not ameliorate, this particular gap.

Our findings suggest that applying to four-year institutions is not enough, since many ever-EL students ultimately enter a two-year, rather than a four-year, institution. Prior research suggests that even when EL students have completed the requisite coursework, they still do not select into four-year colleges (Callahan and Humphries 2016). High schools might benefit from training and professional development for high school counselors around how to best prepare students for the transition into higher education, beyond the initial hurdle of applying to college.

High school educators and postsecondary advisors would do well to consider the whole student when counseling ever-EL youth about their postsecondary options. Understanding financial challenges extends beyond the FAFSA completion to consider the broader needs of and demands placed on our ever-EL student population (Núñez and Sansone 2016). Professional development for counselors might focus on information sessions for ever-EL families (J.P. Murphy and Murphy 2018), the creation of a high school college-going culture (Achinstein, Curry, and Ogawa 2015), and the implementation of bridge programs that seek to connect students to college campuses prior to their initial enrollment (Castleman and Page 2013). School leaders might engage in school- or district-wide self-study for evidence of a college-going culture and student and family needs to facilitate the transition to four-year colleges.

Prior research has also pointed to Latinx young adults' preference for attending college close to home (Turley 2009); it is not lost on us that Latinx young adults comprise the lion's share (93%) of our ever-EL sample. In the early 2000s, California developed the University of California at Merced in response to the geographic needs of its highly Latinx Central Valley population (Descrochers 2011), creating one of the first research-1 intensive higher education institutions developed for a commuter population. Further research is necessary to understand the two- and four-year enrollment patterns among ever-ELs, whether and how distance informs those patterns, and the ways in which states can respond to the postsecondary needs and degree attainment aspirations of their constituents.

In conclusion, we find that ever-EL status is in fact associated with both high school graduation and postsecondary enrollment. Much of the prior research painted a bleak picture of high-school and postsecondary outcomes for EL students; capturing both current and former ELs in our data and accounting for a rich set of covariates in our models allows us to present a clearer picture of ever-EL students' college-going patterns. Future research should explore what drives ever-EL students' overrepresentation at two- rather than four-year institutions, especially given evidence that students may benefit more from bachelor's degrees than subbaccalaureate degrees in terms of labor market outcomes (Schudde and Bernell 2019). Given the prevalence of ever-ELs in Texas' youth population and subsequently, its workforce, optimizing their earning potential will benefit the state as a whole.

Table 1:
Descriptive Statistics by Linguistic Status in Kindergarten (Part 1 of 2)

	Ever-ELs (N=93,827)		**Non-ELs** (N=320,801)	
Demographics	**Mean**	**SD**	**Mean**	**SD**
Female	0.495	0.500	0.492	0.500
Race/Ethnicity				
White	0.010	0.101	0.489	0.500
Hispanic	0.928	0.259	0.312	0.463
Black	0.005	0.069	0.179	0.383
Asian	0.057	0.231	0.016	0.124
Other	0.001	0.024	0.003	0.059
Home Language				
English	0.004	0.059	0.940	0.237
Spanish	0.926	0.261	0.048	0.213
Other Language	0.070	0.255	0.012	0.110
Eco. Dis. (Ever Free or Reduced Lunch)	0.845	0.362	0.576	0.494
Academic Experiences and Outcomes				
Special Education	0.162	0.369	0.215	0.411
Ever Repeated a Grade	0.294	0.456	0.201	0.401
% of Days Absent: 9th Grade	0.051	0.081	0.049	0.072
# of High Schools Attended	1.316	0.567	1.340	0.598
Course taking				
Number of courses failed in 9th grade	0.438	1.119	0.276	0.859
Higher than Algebra-II				
Number of courses	0.735	0.763	0.791	0.791
Dual Enrollment				
Number of courses	0.780	2.215	0.898	2.189
9th Grade TAKS Test Scores				
Math Z-score	-0.014	0.910	0.103	0.962
Reading Z-score	-0.090	0.863	0.105	0.952
High School Characteristics				
Proportion				
White Students	0.150	0.193	0.385	0.265
English Learner Students	0.100	0.088	0.042	0.051
Special Education	0.092	0.036	0.097	0.040
Students in Advanced Coursework	0.301	0.137	0.293	0.130
Teachers w/ 5-y Experience or Fewer	0.347	0.131	0.313	0.121
Distance to the Nearest Four-year (Log)	2.327	1.222	2.270	1.121
Charter	0.057	0.232	0.034	0.182

Table 1:
Descriptive Statistics by Linguistic Status in Kindergarten (Part 2 of 2)

	Ever ELs (N=93,827)		**Non-ELs** (N=320,801)	
Outcomes				
High school Graduation	0.902	0.297	0.914	0.281
Application to a Four-year College[a]	0.219	0.413	0.251	0.434
College Enrollment (Within 3 Years)[a]				
Any College Enrollment	0.633	0.482	0.641	0.480
Two-Year College Enrollment	0.433	0.495	0.383	0.486
Four-Year College Enrollment	0.201	0.401	0.258	0.437

[a]Means and standard deviations calculated using subsample of Ever-ELs/Non-ELs who graduated from high school (N=84,678) and (N=293,060)

Table 2:
Multilevel Logistic Regression Models Predicting High School Graduation and College Applications (Part 1 of 2)

	Graduation	College Application
Student Background		
Ever-EL Status	1.172***	1.002
	(0.025)	(0.013)
Female	1.099***	1.390***
	(0.016)	(0.011)
Race/Ethnicity		
Hispanic	1.392***	0.954*
	(0.032)	(0.012)
Black	1.474***	2.088***
	(0.039)	(0.032)
Asian	0.845	2.140***
	(0.066)	(0.064)
Other	0.833	0.835
	(0.105)	(0.064)
Ever Free or Reduced Lunch	0.739***	0.627***
	(0.016)	(0.007)
Special Education	1.387***	0.664***
	(0.023)	(0.007)
Ever Repeated a Grade	0.297***	0.458***
	(0.005)	(0.006)
% of Days Absent: 9th Grade	0.001***	0.019***
	(0.000)	(0.002)
# of High Schools Attended	0.778***	0.781***
	(0.009)	(0.008)
Course taking		
Number of courses failed in 9th grade	0.789***	0.727***
	(0.003)	(0.003)
Number of courses > Algebra-II	6.355***	2.205***
	(0.146)	(0.016)
Number of Dual Enrollment Courses	1.427***	1.242***
	(0.024)	(0.003)
9th Grade TAKS Test Scores		
Math Z-score	1.001	1.282***
	(0.010)	(0.008)
Reading Z-score	1.035**	1.165***
	(0.008)	(0.006)

Table 2:
Multilevel Logistic Regression Models Predicting High School Graduation and College Applications (Part 2 of 2)

	Graduation	**College Application**
High School Characteristics		
Proportion		
White Students	0.761	0.427***
	(0.079)	(0.032)
English Learner Students	0.792	1.624
	(0.222)	(0.402)
Special Education	0.047***	0.137***
	(0.013)	(0.046)
Students in Advanced Coursework	21.789***	2.204***
	(3.184)	(0.210)
Teachers w/ ≤5-y Experience	0.178***	1.102
	(0.022)	(0.111)
Distance to Nearest Four-year College (Log)	1.073	1.019
	(0.024)	(0.017)
Charter	0.954	0.796
	(0.083)	(0.056)
Model Statistics		
Constant	2.438***	1.648***
Log Likelihood	-74796.7	-197657.2
Intraclass Correlation	0.440	0.338

N = 414,628

Note. Table presents odds ratios (exponentiated coefficients) with standard errors in parentheses.
* $p<0.01$ ** $p<0.001$ *** $p<0.0001$

Table 3:
Multilevel Logistic Regression Models
Predicting College Enrollment (Part 1 of 2)

	Any College	**4-Year**	**2-Year**
Student Background			
Ever-EL Status	1.115***	0.832***	1.209***
	(0.014)	(0.013)	(0.013)
Female	1.326***	1.157***	1.160***
	(0.010)	(0.011)	(0.008)
Race/Ethnicity			
Hispanic	1.144***	0.858***	1.198***
	(0.014)	(0.013)	(0.013)
Black	1.539***	2.061***	0.936***
	(0.022)	(0.036)	(0.013)
Asian	1.813***	1.630***	0.864***
	(0.057)	(0.044)	(0.021)
Other	0.744**	0.682**	0.966
	(0.052)	(0.063)	(0.064)
Ever Free or Reduced Lunch	0.634***	0.702***	0.887***
	(0.006)	(0.008)	(0.008)
Academic Experiences and Outcomes			
Special Education	0.739***	0.696***	0.824***
	(0.007)	(0.010)	(0.008)
Ever Repeated a Grade	0.592***	0.422***	0.742***
	(0.006)	(0.008)	(0.008)
% of Days Absent: 9th Grade	0.123***	0.008***	0.394***
	(0.012)	(0.001)	(0.035)
# of High Schools Attended	0.826***	0.775***	0.922***
	(0.007)	(0.010)	(0.008)
Course taking			
Number of courses failed in 9th grade	0.854***	0.711***	0.928***
	(0.003)	(0.005)	(0.003)
Number of courses > Algebra-II	1.535***	1.979***	0.812***
	(0.011)	(0.015)	(0.005)
Number of Dual Enrollment Courses	1.204***	1.108***	1.011***
	(0.004)	(0.003)	(0.002)
9th Grade TAKS Test Scores			
Math Z-score	1.045***	1.474***	0.804***
	(0.006)	(0.010)	(0.004)
Reading Z-score	1.090***	1.192***	0.975***
	(0.005)	(0.007)	(0.004)

Table 3:
Multilevel Logistic Regression Models Predicting College Enrollment (Part 2 of 2)

	Any College	**4-Year**	**2-Year**
High School Characteristics			
Proportion			
White Students	0.991	0.483***	1.554***
	(0.049)	(0.037)	(0.077)
English Learner Students	1.117	1.926	0.953
	(0.188)	(0.541)	(0.162)
Special Education	0.392***	0.587	0.420**
	(0.083)	(0.226)	(0.087)
Students in Advanced Coursework	1.417***	1.783***	1.535***
	(0.101)	(0.177)	(0.103)
Teachers w/ ≤5-y Experience	0.905	1.355	0.888
	(0.068)	(0.153)	(0.065)
Distance to the Nearest Four-year (Log)	0.994	1.012	1.002
	(0.010)	(0.017)	(0.011)
Charter	0.849*	0.666***	0.861
	(0.041)	(0.053)	(0.041)
Model Statistics			
Constant	1.195***	1.570***	1.212***
Log Likelihood	-213079.82	-163121.12	-244466.00
Intraclass Correlation	0.14	0.23	0.063

N = 377,738
Note. Table presents odds ratios (exponentiated coefficients) with standard errors in parentheses
* *p<0.01* ** *p<0.001* *** *p<0.0001*

APPENDIX A

Variable Names and Descriptions

Variable Name	Description	Mean (SD)
Identified EL in Kindergarten	Identified as Limited English Proficient by the Language Proficiency Assessment Committee in Kindergarten or attended LEP services; obtained from TEA demographic and attendance data	0.23 (0.42)
Demographics		
Race	Race/ethnicity of the student, obtained from TEA demographic data	
White (reference)	Identified as non-Hispanic White	0.38 (0.49)
Hispanic	Identified as Hispanic	0.45 (0.50)
Black	Identified as non-Hispanic Black	0.14 (0.35)
Asian	Identified as Asian	0.03 (0.16)
Other Race	Identified as another race, including Native Hawaiian or Other Pacific Islander, Native American, two or more races, and unknown	<0.01 (0.05)
Female	Identified as female; drawn from TEA demographic data, which offers dichotomous measure of gender (male or female)	0.49 (0.50)
Economically Disadvantaged	Ever identified as eligible for free lunch; derived from TEA demographic data	0.64 (0.48)
Academic Measures		
Ever in Special Education	Dichotomous indicator of whether a student ever received special education services; generated from TEA enrollment demographic data	0.20 (0.40)
Ever Repeated a Grade	Dichotomous indicator of whether a student ever repeated a grade; generated from TEA attendance data	0.22 (0.42)
Number of Courses Higher than Algebra II	Cumulative number of courses taken higher than Algebra 2; generated from TEA course complete data	0.79 (0.78)
Percent Days Absent (9th)	Percentage of days absent in 9th grade; generated from TEA attendance data	0.50 (0.07)
Number of High Schools Attended	Cumulative number of high schools attended in 9th – 12th grade; generated from TEA attendance data	1.34 (0.59)
TAKS Math Z-Score	Z-Score of TAKS Math scaled score from 9th grade; generated from TEA testing data	0.08 (0.95)
Reading Z-Score	Z-Score of TAKS Reading scaled score from 9th grade; generated from TEA testing data	0.06 (0.94)
Number of Courses Failed	Cumulative number of courses failed in 9th – 12th grade; generated from TEA course complete data	0.92 (1.67)
Campus-Level Variables		
Percent of English Learners	Percentage of English Learners identified in each high school; obtained from public TEA Texas Academic Indicator System	0.06 (0.07)
Percent of White Students	Percentage of White students in each high school; obtained from public TEA Texas Academic Indicator System	0.33 (0.27)
Percent in Special Education	Percentage of students in Special Education in each high school; obtained from public TEA Texas Academic Indicator System	0.10 (0.04)
Percent in Advanced Coursework	Percentage of students in advanced coursework, including dual credit, in each high school; obtained from public TEA Texas Academic Indicator System	0.30 (0.13)

Variable Name	Description	Mean (SD)
Percent of Teachers with 5 or Fewer Years of Experience	Percentage of teachers in each high school with five or fewer years of experience; derived from public TEA Texas Academic Indicator System	0.32 (0.12)
Distance to Nearest Four-Year College	Logged distance in miles from each high school ZIP to the nearest 4-year institution; derived from Texas Education Directory Customized Reports and Data Files and the Integrated Postsecondary Education Data System	2.28 (1.15)
Charter Status	Dichotomous variable indicating if a school is identified as a charter school; derived from TEA campus data	0.04 (0.20)
Outcomes		
High School Graduation	Indicates whether the student graduated from high school; derived from TEA graduation data	0.91 (0.29)
Applied to Four-Year Institution	Indicates whether the student applied to a four-year institution; derived from THECB student admissions data and enrollment data	0.24 (0.43)
College Enrollment Outcomes[a]		
Any College	Indicates whether the student enrolled in any college within 3 years after high school graduation; derived from THECB enrollment data and TEA graduation data	0.64 (0.48)
Four-Year	Identified as four-year institution; obtained from IPEDS data	0.25 (0.43)
Two-Year	Identified as two-year institution; obtained from IPEDS data	0.39 (0.49)

Note. N = 414,628

[a] Means and standard deviations calculated using subsample high school graduates (N=377,738)

REFERENCES

Achinstein, Betty, Marnie W Curry, and Rodney T Ogawa. 2015. "(Re) labeling social status: Promises and tensions in developing a college-going culture for Latina/o youth in an urban high school." *American Journal of Education* 121 (3): 311-345.

Adelman, Clifford. 2006. *The Toolbox Revisited – Paths to Degree Completion From High School Through College.* U.S. Department of Education (Washington, D.C.).

Batalova, Jeanne, and Margie McHugh. 2010. *Number and Growth of Students in US Schools in Need of English Instruction.* Migration Policy Institute (Washington, DC).

Black, Sandra E., Kalena E. Cortes, and Jane Arnold Lincove. 2020. "Apply yourself: Racial and ethnic differences in college application." *Education Finance and Policy* 15 (2): 209-240. https://doi.org/10.1162/edfp_a_00273. https://doi.org/10.1162/edfp_a_00273.

Bowen, William G., Matthew M. Chingos, and Michael McPherson. 2009. *Crossing the Finish Line: Completing College at America's Public Institutions*. Princeton, NJ: Princeton University Press.

Callahan, Rebecca M. February, 2013 2013. *The English Learner Dropout Dilemma: Multiple Risks and Multiple Resources.* California Dropout Research Project Report (CDRP) (Santa Barbara, CA: Santa Barbara University of California). http://www.cdrp.ucsb.edu/pubs_reports.htm.

Callahan, Rebecca M., and Patricia C. Gándara. 2004. "On Nobody's Agenda: Improving English Language Learners' Access to Higher Education." In *Immigrant and Second Language Students: Lessons from Research and Best Practice*, edited by Michael Sadowski, 107-127. Cambridge, MA: Harvard Education Press.

Callahan, Rebecca M., and Melissa Humphries. 2016. "Undermatched? School-based linguistic status, college going, and the immigrant advantage." *American Educational Research Journal* 53 (2): 263-295. https://doi.org/https://doi.org/10.3102/0002831215627857. https://doi.org/10.3102/0002831215627857.

Callahan, Rebecca M., Lei Jiang, and Anne-Marie Núñez. 2022. "EL Policy and Immigrant Politics: State and Federal Policy and Ever-EL Students' Postsecondary Pathways." *Educational Policy*: 08959048221103802. https://doi.org/10.1177/08959048221103802. https://doi.org/10.1177/08959048221103802.

Callahan, Rebecca M., Lindsey Wilkinson, and Chandra Muller. 2008. "School Context and the Effect of ESL Placement on Mexican-Origin Adolescents' Achievement." *Social Science Quarterly* 89 (1): 177-198.

---. 2010. "Academic achievement and course-taking among language minority youth in U.S. Schools: Effects of ESL placement." *Educational Evaluation and Policy Analysis* 32 (1): 84-117. https://doi.org/https://doi.org/10.3102/0162373709359805. https://doi.org/10.3102/0162373709359805.

Callahan, Rebecca M., Lindsey Wilkinson, Chandra Muller, and Michelle L. Frisco. 2009. "ESL Placement and Schools: Effects on Immigrant Achievement." *Educational Policy* 23 (2): 355-384.

Castañeda v. Pickard. 1981.

Castleman, Benjamin L., and Lindsay C. Page. 2013. "The not-so-lazy days of summer: Experimental interventions to increase college entry among low-income high school graduates." *New Directions for Youth Development* 140: 77-97.

Cha, Sung-Hyun. 2015. "Exploring Disparities in Taking High Level Math Courses in Public High Schools." *KEDI Journal of Educational Policy* 12 (1).
Clotfelter, Charles T, Helen F Ladd, and Jacob Vigdor. 2005. "Who teaches whom? Race and the distribution of novice teachers." *Economics of Education Review* 24 (4): 377-392. https://doi.org/https://doi.org/10.1016/j.econedurev.2004.06.008. https://www.sciencedirect.com/science/article/pii/S0272775704001153.
Clotfelter, Charles T, Helen F Ladd, and Jacob L Vigdor. 2007. "Teacher credentials and student achievement: Longitudinal analysis with student fixed effects." *Economics of Education Review* 26 (6): 673-682.
Descrochers, Lindsay Ann. 2011. *The birth of a research university: UC Merced, no small miracle.* UC Berkeley (Berkeley, CA: Center for Studies in Higher Education).
Engberg, Mark E, and Gregory C Wolniak. 2014. "An examination of the moderating effects of the high school socioeconomic context on college enrollment." *The High School Journal* 97 (4): 240-263.
ESSA: The Every Student Succeeds Act. 114-95.
Estrada, Peggy. 2014. "English learner curricular streams in four middle Schools: Triage in the trenches." *The Urban Review* 46 (4): 535-573. https://doi.org/10.1007/s11256-014-0276-7. http://dx.doi.org/10.1007/s11256-014-0276-7.
Estrada, Peggy, and Haiwen Wang. 2018. "Making English Learner Reclassification to Fluent English Proficient Attainable or Elusive: When Meeting Criteria Is and Is Not Enough." *American Educational Research Journal* 55 (2): 207-242. https://doi.org/10.3102/0002831217733543. https://journals.sagepub.com/doi/abs/10.3102/0002831217733543.
Estrada, Peggy, Haiwen Wang, and Timea Farkas. 2020. "Elementary English Learner Classroom Composition and Academic Achievement: The Role of Classroom-Level Segregation, Number of English Proficiency Levels, and Opportunity to Learn." *American Educational Research Journal* 57 (4): 1791-1836.
Frost, Michelle Bellessa 2007. "Texas students' college expectations: Does high school racial composition matter?" *Sociology of Education* 80 (1): 43-65.
Garcia, Ray. 2015. *Bridging the English learner achievement gap: Essential lessons for school leaders*. Teachers College Press.
Grodsky, Eric, and Catherine Riegle-Crumb. 2010. "Those who choose and those who don't: Social background and college orientation." *The Annals of the American Academy of Political and Social Science* 627 (1): 14-35.
Hibel, Jacob, and Andrea D. Jasper. 2012. "Delayed Special Education Placement for Learning Disabilities Among Children of Immigrants." *Social Forces* 91 (2): 503-530. https://doi.org/10.1093/sf/sos092. https://doi.org/10.1093/sf/sos092.
Irwin, Véronique, Jijun Zhang, Xiaolei Wang, Sarah Hein, Ke Wang, Ashley Roberts, Christina York, Amy Barmer, Farrah Bullock Mann, and Rita Dilig. 2021. "Report on the Condition of Education 2021. NCES 2021-144." *National Center for Education Statistics*.
Jackson, C Kirabo. 2010. "A little now for a lot later: A look at a Texas Advanced Placement incentive program." *Journal of Human Resources* 45 (3): 591-639.
Jarsky, Karen McClafferty, Patricia M. McDonough, and Anne-Marie Núñez. 2009. "Establishing a college culture in secondary schools through P-20 collaboration: A case study." *Journal of Hispanic Higher Education* 8 (4): 357-373.

https://doi.org/doi:10.1177/1538192709347846. http://journals.sagepub.com/doi/abs/10.1177/1538192709347846.

Johnson, Angela. 2019. "The Effects of English Learner Classification on High School Graduation and College Attendance." *AERA Open* 5 (2): 2332858419850801. https://doi.org/10.1177/2332858419850801. https://journals.sagepub.com/doi/abs/10.1177/2332858419850801.

Kanno, Yasuko. 2018. "High-performing English learners' limited access to four-year college enrollment." *Teachers College Record* 120 (4): 1-26.

---. 2021. *English Learners Access to Postsecondary Education: Neither College nor Career Ready*. Multilingual Matters.

Kanno, Yasuko, and Jennifer G. Cromley. 2013. "English Language Learners' Access to and Attainment in Postsecondary Education." *TESOL Quarterly* 47 (1): 89-121. https://doi.org/10.1002/tesq.49. http://dx.doi.org/10.1002/tesq.49.

---. 2015. "English language learners' pathways to four-year colleges." *Teachers College Record* 117 (12): 1-46.

Kanno, Yasuko, and Linda Harklau, eds. 2012. *Linguistic Minority Students Go to College: Preparation, Access, and Persistence*. Florence, KY: Routledge.

Kanno, Yasuko, and Sara E. N. Kangas. 2014. "“I'm Not Going to Be, Like, for the AP”: English Language Learners' Limited Access to Advanced College-Preparatory Courses in High School." *American Educational Research Journal* 51 (5): 848-878. https://doi.org/10.3102/0002831214544716. http://aer.sagepub.com/content/51/5/848.abstract.

Kanno, Yasuko, and Manka M. Varghese. 2010. "Immigrant and Refugee ESL Students' Challenges to Accessing Four-Year College Education: From Language Policy to Educational Policy." *Journal of Language, Identity & Education* 9 (5): 310-328. https://doi.org/10.1080/15348458.2010.517693. https://doi.org/10.1080/15348458.2010.517693.

Kieffer, Michael J., and Karen D. Thompson. 2018. "Hidden progress of multilingual students on NAEP." *Educational Researcher* Forthcoming: 0013189X18777740. https://doi.org/0013189X18777740.

Lareau, Annette, and Kimberly Goyette. 2014. *Choosing homes, choosing schools*. Russell Sage Foundation.

Long, Mark C., Dylan Conger, and Patrice Iatarola. 2012. "Effects of high school course-taking on secondary and postsecondary success." *American Educational Research Journal* 49 (2): 285-322. https://doi.org/10.3102/0002831211431952. https://journals.sagepub.com/doi/abs/10.3102/0002831211431952.

Long, Mark C., Victor B. Sáenz, and Marta Tienda. 2010. "Policy transparency and college enrollment: did the Texas top ten percent law broaden access to the public flagships?" *The Annals of the American Academy of Political and Social Science* 627 (1): 82-105.

Lopez, Alexis A, Emilie Pooler, and Robert Linquanti. 2016. *Key issues and opportunities in the initial identification and classification of English learners.* Educational Testing Services (Princeton, NJ). http://dx.doi.org/10.1002/ets2.12090.

López, Francesca A., Elizabeth McEneaney, and Martina Nieswandt. 2015. "Language Instruction Educational Programs and Academic Achievement of Latino English Learners: Considerations for States with Changing Demographics." *American Journal of*

Education 121 (3): 417-450. https://doi.org/10.1086/680410. http://www.jstor.org/stable/10.1086/680410.
Mendoza, Cecilia. 2019. "Language development policies and practices impacting the college and career readiness of long-term English learners (LTELs) in secondary schools." *Educational Leadership and Administration: Teaching and Program Development* 30: 14-34.
Mosqueda, Eduardo, Saúl I. Maldonado, Mary M. Capraro, and Robert M Capraro. 2022. "Systematized Discrimination: Linguistic, Racial and Cultural Differences Can Equal Mathematics Success." *The Urban Review* 54 (3): 428-449. https://doi.org/10.1007/s11256-021-00620-3. https://doi.org/10.1007/s11256-021-00620-3.
Muller, Chandra. 2015. "Measuring School Contexts." *AERA Open* 1 (4): 1-9. https://doi.org/doi:10.1177/2332858415613055. http://journals.sagepub.com/doi/abs/10.1177/2332858415613055.
Muller, Chandra, Catherine Riegle-Crumb, Kathryn S. Schiller, Lindsey Wilkinson, and Kenneth A. Frank. 2010. "Race and Academic Achievement in Racially Diverse High Schools: Opportunity and Stratification." *Teachers College Record* 112 (4): 1038-1063.
Murphy, Joel P., and Shirley A. Murphy. 2018. "Get Ready, Get In, Get Through: Factors that Influence Latino College Student Success." *Journal of Latinos and Education* 17 (1): 3-17. https://doi.org/10.1080/15348431.2016.1268139. https://doi.org/10.1080/15348431.2016.1268139.
Murphy, Mark, and Angela Johnson. 2020. *Dual identification? The effects of English learner status on Special Education placement.* . Stanford University (Stanford Center for Education Policy Analysis).
NASEM. 2018. *English Learners in STEM Subjects: Transforming Classrooms, Schools, and Lives.* National Academies of Sciences Engineering and Medicine, The National Academies Press (Washington, DC). https://doi.org/10.17226/25182
NCES. 2016. Digest of Education Statistics Table 302.20: Percentage of recent high school completers enrolled in 2- and 4-year colleges by race/ethnicity, 1960 through 2018. . https://nces.ed.gov/programs/digest/d19/tables/dt19_302.20.asp: National Center for Educational Statistics.
---. 2021. Digest of Education Statsitics, Table 203.40. . https://nces.ed.gov/programs/digest/d21/tables/dt21_203.40.asp: National Center for Education Statistics.
Niu, Sunny X., and Marta Tienda. 2013. "High School Economic Composition and College Persistence." *Research in Higher Education* 54 (1): 30-62. https://doi.org/10.1007/s11162-012-9265-4. https://doi.org/10.1007/s11162-012-9265-4.
Núñez, Anne-Marie, Cecilia Rios-Aguilar, Yasuko Kanno, and Stella M. Flores. 2016. "English learners and their transition to postsecondary education." In *Higher Education: Handbook of Theory and Research*, edited by B. Michael Paulsen, 41-90. Cham: Springer International.
Núñez, Anne-Marie, and Vanessa A. Sansone. 2016. "Earning and Learning: Exploring the Meaning of Work in the Experiences of First-generation Latino College Students." *The Review of Higher Education* 40 (1): 91-116.

Palardy, Gregory J., Russell W. Rumberger, and Truman Butler. 2015. "The Effect of High School Socioeconomic, Racial, and Linguistic Segregation on Academic Performance and School Behaviors." *Teachers College Record* 117 (12).

Pellegrino, James W., Margaret L. Hilton, and National Research Council. 2013. *Education for life and work: Developing transferable knowledge and skills in the 21st century*. Washington, D.C.: National Academies Press.

Perna, Laura W. 2000. "Differences in the Decision to Attend College among African Americans, Hispanics, and Whites." *The Journal of Higher Education* 71 (2): 117-141. http://www.jstor.org/stable/2649245.

Robinson-Cimpian, Joseph P., Karen D. Thompson, and Ilana M. Umansky. 2016. "Research and policy considerations for English learner equity." *Policy Insights from the Behavioral and Brain Sciences* 3 (1): 129-137. https://doi.org/10.1177/2372732215623553. http://bbs.sagepub.com/content/3/1/129.abstract.

Rodriguez, Gloria M., and Lisceth Cruz. 2009. "The transition to college of English learner and undocumented immigrant students: Resource and policy implications " *Teachers College Record* 111 (10): 2385-2418.

Santibañez, Lucrecia, and María Estela Zarate. 2014. "Bilinguals in the U.S. and College Preparation." In *The Bilingual Advantage: Language, Literacy, and the U.S. Labor Market*, edited by Rebecca M. Callahan and Patricia C. Gándara, 213-235. Clevedon, U.K.: Multlingual Matters.

Santos, Maria, Martha Castellón Palacios, Tina Cheuk, Rebecca Greene, Diana Mercado-García, Lisa Zerkel, Kenji Hakuta, and Renae Skarin. 2018. *Preparing English Learners for College and Career: Lessons from Successful High Schools*. Teachers College Press.

Saunders, William M., and David J. Marcelletti. 2013. "The gap that can't go away: The Catch-22 of reclassification in monitoring the progress of English learners." *Educational Evaluation and Policy Analysis* 35 (2): 139-156. https://doi.org/10.3102/0162373712461849. https://journals.sagepub.com/doi/abs/10.3102/0162373712461849.

Schudde, Lauren, and Kaitlin Bernell. 2019. "Educational attainment and nonwage labor market returns in the United States." *AERA Open* 5 (3): 2332858419874056.

Scott, Judith A, Susan Leigh Flinspach, Tatiana F Miller, Ondine Gage-Serio, and Jack L Vevea. 2009. "An analysis of reclassified English learners, English learners, and native English fourth graders on assessments of receptive and productive vocabulary." 58th Yearbook of the National Reading Conference.

Slama, Rachel B., Erin F. Haynes, Lynne Sacks, Dong Hoon Lee, and Diane August. 2015. *Massachusetts English Language Learners' Profiles and Progress: A Report for the Massachusetts Department of Elementary and Secondary Education.* American Institutes for Research (Washington, D.C.). file:///C:/Users/callahan/Box%20Sync/NAS%20Invited%20Report/10MA-ELLStudyReport.pdf.

Strong, Kim, and Kathy Escamilla. 2023. "More than Language Learning: A QuantCrit Analysis of the Relationship Between District Contexts and Long-Term English Learner Rates." *Journal of Education for Students Placed at Risk (JESPAR)* 28 (1): 47-68. https://doi.org/10.1080/10824669.2022.2123327. https://doi.org/10.1080/10824669.2022.2123327.

Sugarman, Julie. 2021. *The Impacts on English Learners of Key State High School Policies and Graduation Requirements.* Migration Policy Institute (Washington, DC). https://www.migrationpolicy.org/sites/default/files/publications/high-school-policies-els-2021_final.pdf.

Thompson, Karen D. 2015. "Questioning the Long-Term English Learner Label: How Categorization Can Blind Us to Students' Abilities." *Teachers College Record* 117 (12).

Thompson, Karen D., Ilana M. Umansky, and W. Joshua Rew. 2022. "Improving Understanding of English Learner Education Through an Expanded Analytic Framework." *Educational Policy* 0 (0): 08959048221087214. https://doi.org/10.1177/08959048221087214. https://journals.sagepub.com/doi/abs/10.1177/08959048221087214.

Turley, Ruth N. López. 2009. "College Proximity: Mapping Access to Opportunity." *Sociology of Education* 82 (2): 126-146. https://doi.org/10.1177/003804070908200202. http://soe.sagepub.com/content/82/2/126.abstract.

Umansky, Ilana M. 2016. "Leveled and exclusionary tracking: English learners' access to academic content in middle school." *American Educational Research Journal* 53 (6): 1792-1833. https://doi.org/10.3102/0002831216675404. http://journals.sagepub.com/doi/abs/10.3102/0002831216675404.

Villarreal, Mike. 2018. "The politics and policies of higher education in Texas: 1995-2013." Doctorate, Public Affairs, University of Texas-Austin.

Zaff, Jonathan F., Max Margolius, Shannon M. Varga, Alicia D. Lynch, Catalina Tang, and Alice E. Donlan. 2020. "English Learners and High School Graduation: A Pattern-Centered Approach to Understand within-Group Variations." *Journal of Education for Students Placed at Risk (JESPAR)*: 1-19. https://doi.org/10.1080/10824669.2020.1780597. https://doi.org/10.1080/10824669.2020.1780597.