

At-a-Glance

KEY ISSUE

English languages learners' (ELLs) chances of meeting college preparatory requirements increase with early access to college preparatory coursework in high school. Academic support programs that assist ELLs in meeting those requirements are critical to improving college readiness and college-going patterns.

Primary Findings

- Measured at both the end of 9th grade and at the end of 12th grade, greater percentages of English language learners were off track to meet college requirements compared to their non-English language learner peers.
- Students who were identified as ELLs early in high school (9th grade) had a better chance of being on track to meet college requirements compared to those identified later in high school (10th grade or beyond).
- Based on the sample analyzed, by the time ELLs complete high school, the majority will not be able to matriculate to a 4-year public university in California without remediation.

High School Course-Taking Patterns for English Language Learners: A Case Study From California

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THE CONTEXT

Preparation for postsecondary education includes taking a sequence of courses in high school that not only complies with college entrance requirements but also provides students with the opportunity to demonstrate academic proficiency in core content areas of the curriculum. Previous research has shown that taking a more rigorous set of coursework in high school is associated with less need for college remediation (Hoyt & Sorenson, 2001); increased persistence in college (Warburton, Bugarin, Nuñez, & Carroll, 2001; Adelman, 1999, 2006); and higher earnings later in life (Levine & Zimmerman, 1995; Rose & Betts, 2004). Research also has shown that many high school courses lack academic rigor (see, for example, ACT, 2007), and studies incorporating high school transcript data have found that high school coursework completion and rigor vary by race/ethnicity (Planty, Bozick, & Ingels, 2006; Planty, Provasnik, & Daniel, 2007). These findings have led education policymakers to raise the issue of improving access to higher education for student groups that traditionally have been underrepresented in college (Kirst & Venezia, 2004; Gandara, Horn, & Orfield, 2005). In some sense, access to higher education is predicated on access within high school. Some students attend schools in which rigorous courses are simply unavailable (or unavailable to them), although California policy in recent years has emphasized that a college-ready curriculum at least be offered in each public high school.

English language learners (ELLs) represent a large group that is underrepresented in college. ELLs face an increased challenge to meet college preparatory requirements when courses that are structured to support their language development do not contain the academic content that is required for students to stay on track for college. Koelsch (2006) notes that the chances of ELLs' success in high school are increased when barriers to taking accelerated courses are removed. Ultimately, ELLs benefit from taking college preparatory courses in tandem with a variety of academic supports for learning.

The context for the discussion of high school course completion patterns is broad and includes the preparation patterns of ELLs from preschool onward. In California, where ELLs represent one of every four students

in public schools (Rumberger & Gandara, 2000), the education of ELLs is a central concern to education policymakers. Educational opportunities for ELLs in the state, when compared with opportunities for English speakers, reveal less qualified teachers, an inferior curriculum, less time to cover that curriculum, poor school facilities, and assessment with invalid instruments (Gandara, Rumberger, Maxwell-Jolly, & Callahan, 2003).

These concerns have persisted for some time. Minicucci and Olsen (1991, 1992) reported that a lack of cohesive programs and insufficient access to content courses for ELLs are central concerns in California's high schools. Additionally, Callahan (2005) reported that ELLs are less likely than English speakers to pass the more rigorous courses that meet qualifications for college admissions. Indeed, many ELLs never choose even to enroll in those courses and drop out of high school. Jespen and De Alth (2005) reported on unpublished data from the Los Angeles Unified School District that showed only 27% of ELLs who enrolled in 9th grade in 2000 completed high school 4 years later.

ANALYTIC APPROACH

Within the past decade, a number of studies have examined student-level high school transcripts (see, for example, Adelman, 1999; Adelman, 2006; Finn, 1999; Burkam, Lee, & Owings, 2003; Planty et al., 2006; Planty et al., 2007). These transcripts commonly provide a wealth of detailed information about the courses in which students enroll. Transcript data commonly include information on every course attempted, such as the final grade earned, the semester in which the student was enrolled, and an indicator variable for honors and Advance Placement courses.

In this research brief, we examine transcript data from 54 high schools in California to look at the specific course-taking patterns of ELLs. We investigate the patterns by which ELLs complete 9th grade in English and mathematics and how that links to the accumulation of a comprehensive sequence of rigorous courses by the time the ELLs are high school seniors. By examining the course names in the transcript file, we were able to identify the courses that were designed for ELLs. These courses were labeled specifically as "EL" (English language), "ELL," "ELD" (English language development), "ESL" (English as a second language), "Sheltered" (integration of native language and content instruction), and "SDAIE" (Specially Designed Academic Instruction in English).

In addition to tracking the courses that students took, we were interested in whether the students had started high school with an ELL designation

TAKE - AWAY

State level

- The college-going patterns of English language learners (ELLs) will not change dramatically unless students have access to, and success completing, college preparatory coursework *early* in high school. Attention to the progress of ELLs in both language proficiency *and* academic proficiency before they reach high school is essential to improving these long-term educational outcomes.

or whether that designation was applied later (after 9th grade). In the analysis that follows, we distinguish between students who were enrolled in ELL courses in 9th grade, and those who did not start taking ELL courses until after 9th grade. This differentiation adds some information about the consequences of starting high school with an ELL designation.

The data used in this brief contains progress variables to indicate whether students were on track to be eligible to attend a California State University (CSU) or University of California (UC) campus upon graduating from high school. This variable provides an objective benchmark by which to measure the progress of students at various points in their high school careers. These benchmarks consist of completing a certain number of academic requirements known as “A–G” courses (“A” refers to history/social science, “B” refers to English, “C” refers to math, and so on) and maintaining a specified grade point average. With these benchmarks at each grade level in place, we can assess the progress of ELLs as they advance through high school. Table 1 summarizes the number of years of these courses that are required for entering the CSU system and UC system as a freshman.

Previous research has tracked course-taking patterns and used similar measures to assess student progress throughout high school (see, for example, Allensworth & Easton, 2005). Finkelstein and Fong (2008) reviewed a different cohort of the data reviewed for this brief and found that completing 1 year of college preparatory English and mathematics in 9th grade is an enormous challenge for many students. As early as the end of 9th grade, more than one third of the students in this study’s sample did not meet the CSU requirement in English and nearly half had not completed two semesters of college preparatory mathematics. Many students missed both requirements. This brief provides a refined analysis that focuses specifically on the course completion patterns of ELLs.

Table 1. High School Course Requirements for California’s Public Higher Education Systems

Course Type	Years Required for Each System	
	California State University System	University of California System
A—History/social science	2 required	2 required
B—English	4 required	4 required
C—Mathematics	3 required, 4 recommended	3 required, 4 recommended
D—Laboratory science	2 required	2 required, 3 recommended
E—Language other than English	2 required	2 required, 3 recommended
F—Visual and performing arts	1 required	1 required
G—College preparatory electives	1 required	1 required

THE DATASET

The data used for this analysis is from the Transcript Evaluation Services (TES) data file, an integrated computer-based system developed by UC to identify the top 4% of students in all of California’s high schools who would be eligible to attend the UC system. The TES extracted high school transcripts during the spring of the 2005–2006 school year from 54 schools.¹ To create a sample with full high school coursework information, the sample of students was restricted to high school seniors. Collectively, these schools yielded 44,813 transcripts. These

¹ These schools were not selected at random to participate in TES. Instead, they were self-selected into the sample because they had the technology to have their transcripts extracted.

transcripts included information on the 9th-, 10th-, 11th-, and 12th-grade courses taken, course grades, and the year and semester in which students took the courses. The transcripts were linked to the student data file to get the demographic information about each student. The student records in the TES dataset have been supplemented with school-level characteristics that are reported by the California Department of Education. From this data link, we have been able to demonstrate that the students sampled from these selected schools do not differ from those in the state as a whole.

DEFINITIONS

As noted, we reviewed transcripts for courses that were labeled specifically as EL, ELL, ELD, ESL, Sheltered, and SDAIE. We considered all of these to indicate some kind of an EL course. As a consequence, the following distinctions are used in the analysis that follows:

- Non-English learner: A student who did not take any ELL courses during Grades 9–12.
- English language learner: A student who took at least one ELL course during Grades 9–12.
- English language learner (early ID): A student who took at least one ELL course in Grade 9.
- English language learner (late ID): A student who did not take an ELL course in Grade 9 but took at least one ELL course in Grades 10–12.

DESCRIPTION OF THE DATA

Status and demographics of ELLs

As shown in Table 2, we reviewed 44,813 transcript records in which approximately 10% showed a student having taken an ELL course. This left 4,654 students for whom we could assess the trajectory of high school course taking with some ELL coursework. Table 3 refines the demographic patterns of ELLs and shows gender and ethnicity patterns for the entire dataset. It also shows that the majority of ELLs were classified as early ID, indicating that they took an ELL course during their 9th-grade year.

Table 2. Status of ELLs

Status	Number of Students	Percentage Among English language learners	Share of Total (%)
Non-English learner	40,159		89.6
English language learner	4,654 ^a		10.4
<i>English language learner (early ID)</i>	3,830	82.3%	8.6
<i>English language learner (late ID)</i>	824	17.7%	1.8
Total	44,813^b		

a. Total number of English language learners is equal to the sum of English language learner (early ID) and English language learner (late ID).
 b. Total number of students in the sample (44,813) is equal to the sum of the rows for Non-English learner and English language learner.

Table 3. Demographics of ELLs

Demographics		Total Students	English language learner (% of total)	English language learner Early ID (%)
Gender	Female	23,646	9.9	8.1
	Male	21,167	11.0	9.0
Ethnicity	African American	6,123	1.5	1.2
	Asian and Pacific Islander	4,139	17.6	13.0
	Hispanic	200	14.1	12.0
	Native American	7,846	1.0	1.0
	White		1.1	0.5
Free or reduced-price lunch	No	26,062	9.6	7.2
	Yes	18,751	11.4	10.5

Enrollment in English and mathematics courses by the end of 9th grade, by ELL status

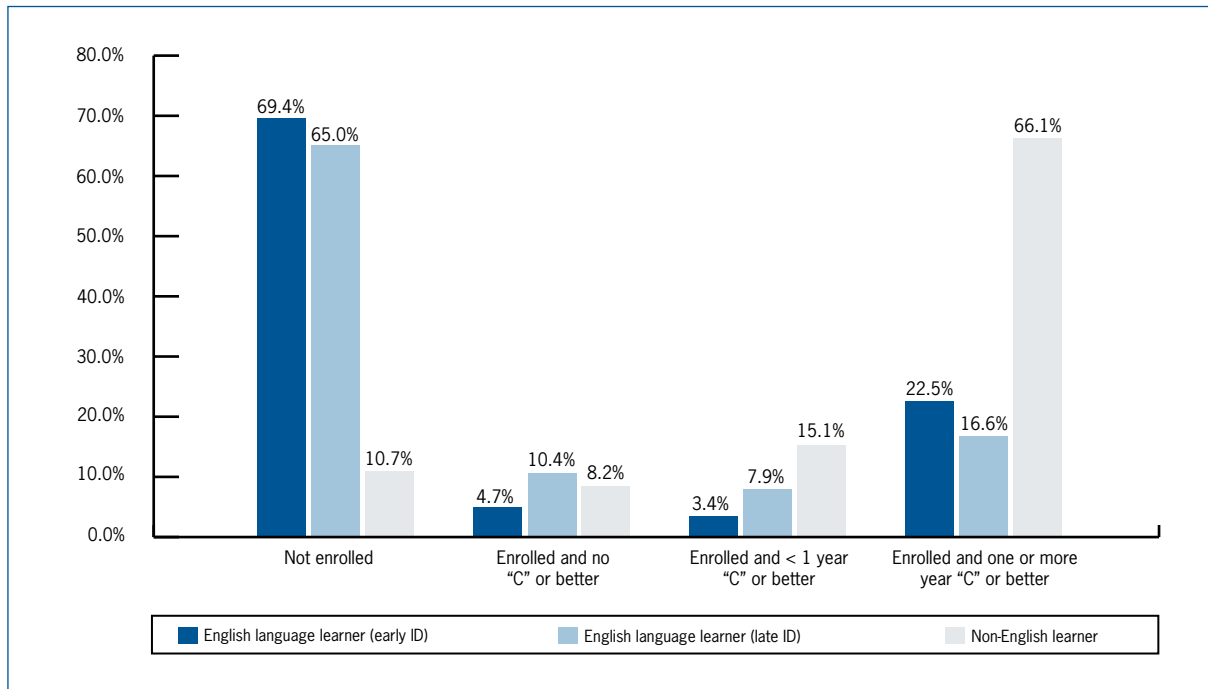
Our analysis continued with an examination of the proportion of students who took English and mathematics courses during 9th grade. We created some rules to classify the students as they progress through high school. For example, we differentiated between students who took less than 1 year of a course versus those who took a full year and between those who earned a grade of “C” or better during that year and those who did not. The year of completion and the minimum grade threshold equate with the entrance requirements of the CSU system and are consistent with “on-track” status as high school freshmen.

Table 4 and Figure 1 show that English language learners (early ID) did not enroll in English courses at a higher percentage than non-English learners (69.4% vs. 10.7%). The difference between those ELLs who had been identified early and those ELLs who had been identified late was much smaller (69.4% vs. 65.0%). Consequently, a smaller proportion of ELLs (early ID) completed at least 1 year of English with a grade of “C” or better than non-English learners (22.5% vs. 66.1%) by the end of 9th grade. Interestingly however, the completion rate at the end of 9th grade was higher in English courses for ELLs (early ID) than ELLs (late ID) (22.5% vs. 16.6%). These differences are statistically significant at the 5% level.

Table 4. Enrollment in English Courses by the End of 9th Grade, by Earned Grades

Enrollment Status	Number of English language learners (early ID) (%)	Number of English language learners (late ID) (%)	Number of Non-English learners (%)
Not enrolled	2,659 (69.4)	536 (65.0)	4,283 (10.7)
Enrolled without a grade “C” or better	181 (4.7)	86 (10.4)	3,273 (8.2)
Completed less than 1 year with a grade “C” or better	130 (3.4)	65 (7.9)	6,070 (15.1)
Completed 1 or more years with a grade “C” or better	860 (22.5)	137 (16.6)	26,533 (66.1)
Total	3,830	824	40,159

Figure 1. Enrollment in English Courses by the End of 9th Grade, by Earned Grades



In Table 5 and Figure 2, we examine mathematics course completion patterns in 9th grade.

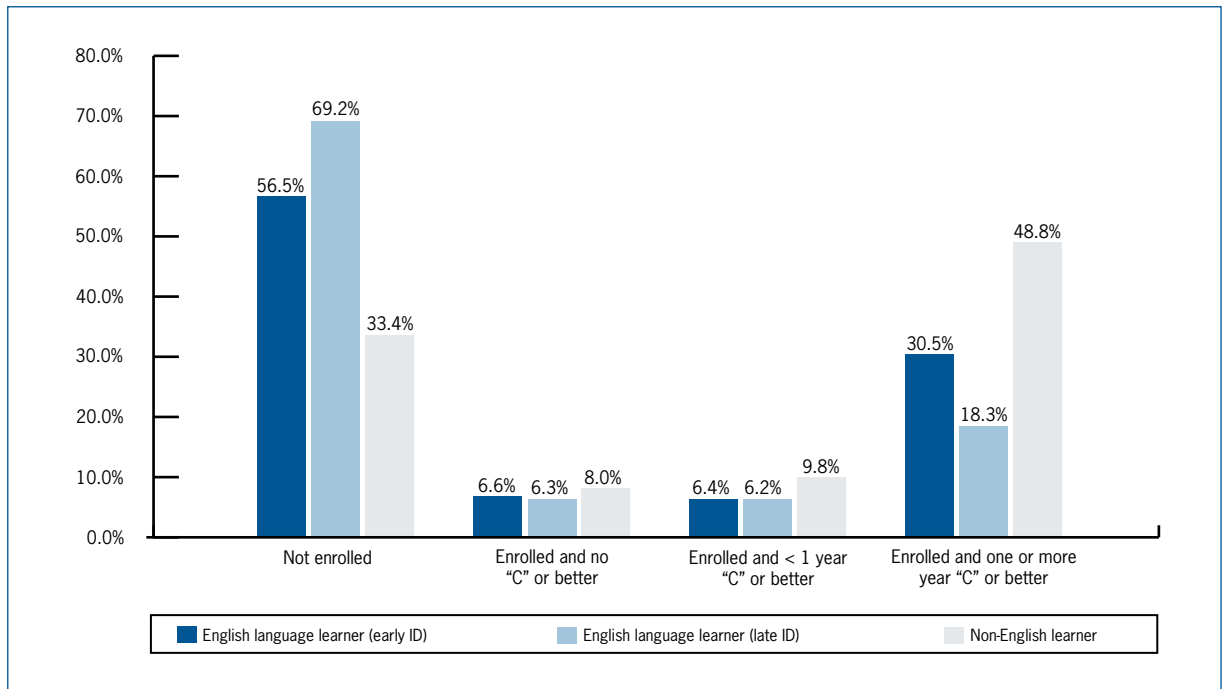
Replicating the pattern seen earlier, English language learners (early ID) did not enroll in mathematics courses at a higher percentage than non-English learners (56.5% vs. 33.4%). The difference in proportions widened between English language learners (late ID) and non-English learners (69.2% vs. 33.4%) for 9th-grade mathematics enrollment.

Consequently, English language learners (early ID) completed at least 1 year of mathematics at a lower rate than non-English learners (30.5% vs. 48.8%) but had a higher completion rate than English language learners (late ID) (30.5% vs. 18.3%). These differences are statistically significant at the 5% level.

Table 5. Enrollment in Mathematics Courses by the End of 9th Grade, by Earned Grades

Enrollment Status	Number of English language learners (early ID) (%)	Number of English language learners (late ID) (%)	Number of Non-English learners (%)
Not enrolled	2,165 (56.5)	570 (69.2)	13,403 (33.4)
Enrolled without a grade "C" or better	251 (6.6)	52 (6.3)	3,210 (8.0)
Completed less than 1 year with a grade "C" or better	247 (6.4)	51 (6.2)	3,929 (9.8)
Completed 1 or more years with a grade "C" or better	1,167 (30.5)	1 51 (18.3)	19,617 (48.8)
Total	3,830	824	40,159

Figure 2. Enrollment in Mathematics Courses by the End of 9th Grade, by Earned Grades



Overlaps between English and Mathematics

The patterns of English and mathematics course taking shown above indicate that many students do not enroll in or complete these key courses as 9th-grade students and that the patterns for ELLs are significantly different than those of non-English learners. What about students who take both an English course and a mathematics course *simultaneously* in 9th grade? Of course the objective is to complete 1 full year of these foundation courses to be on track for college by the end of 9th grade. Tables 6 and 7, and Figures 3 and 4 illustrate the enrollment and completion patterns of students who did and did not take both an English course and a mathematics course simultaneously.

By the end of 9th grade, a higher percentage of non-English learners completed both 1 year of English and 1 year of mathematics when compared with both English language learners (early ID) (39.5% vs. 9.2%) and English language learners (late ID) (39.5% vs. 5.8%).

For English courses only, English language learners (late ID) completed courses at a lower percentage than English language learners (early ID) (10.8% vs. 13.3%, not statistically significant) and non-English learners (10.8% vs. 26.6%). However, for those who took mathematics courses only, English language learners (early ID) completed courses at a higher percentage than English language learners (late ID) (21.3% vs. 12.5%) and non-English learners (21.3% vs. 9.4%). These differences are statistically significant at the 5% level.

Table 6. Enrollment in English and Mathematics Courses by the End of 9th Grade

Enrollment Status	Number of English language learners (early ID) (%)	Number of English language learners (late ID) (%)	Number of Non-English learners (%)
Neither English nor mathematics courses	1,620 (42.3)	426 (51.7)	2,816 (7.0)
1 year of mathematics only	1,039 (27.1)	110 (13.3)	1,467 (3.7)
1 year English only	545 (14.2)	144 (17.5)	10,587 (26.4)
1 year of both English and mathematics	626 (16.3)	144 (17.5)	25,289 (63.0)

Figure 3. Enrollment in English and Mathematics Courses by the End of 9th Grade*

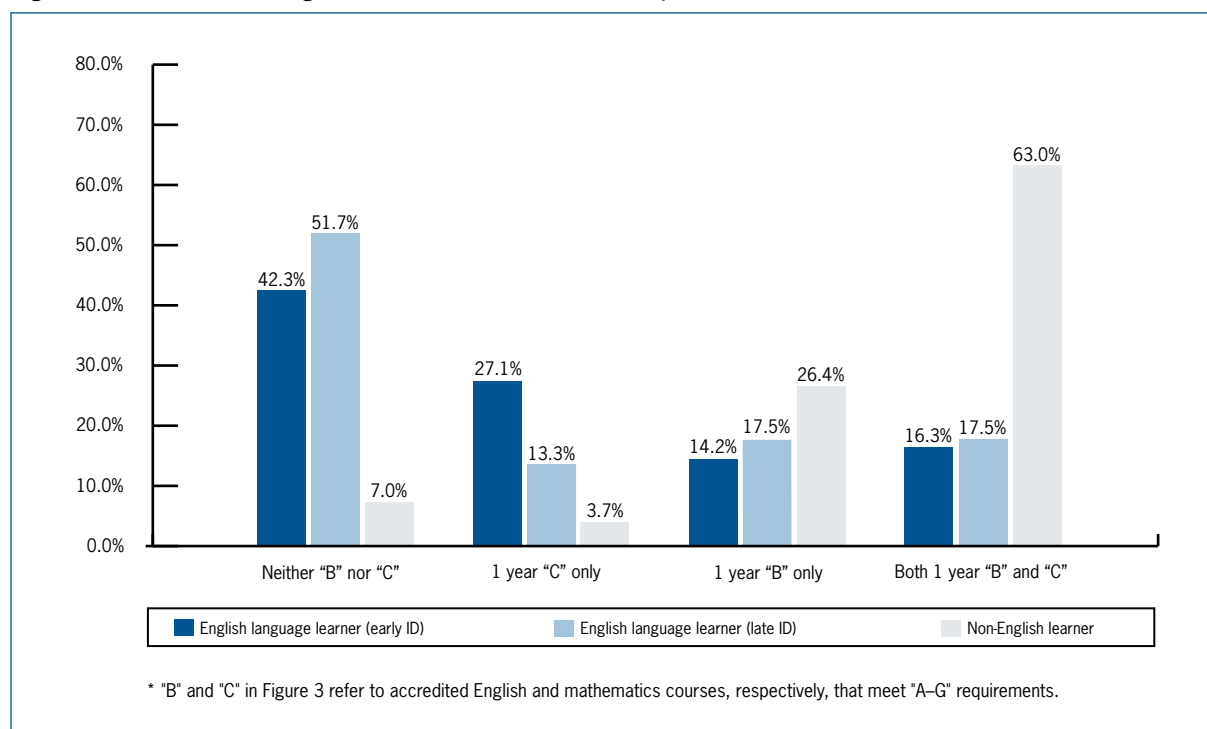
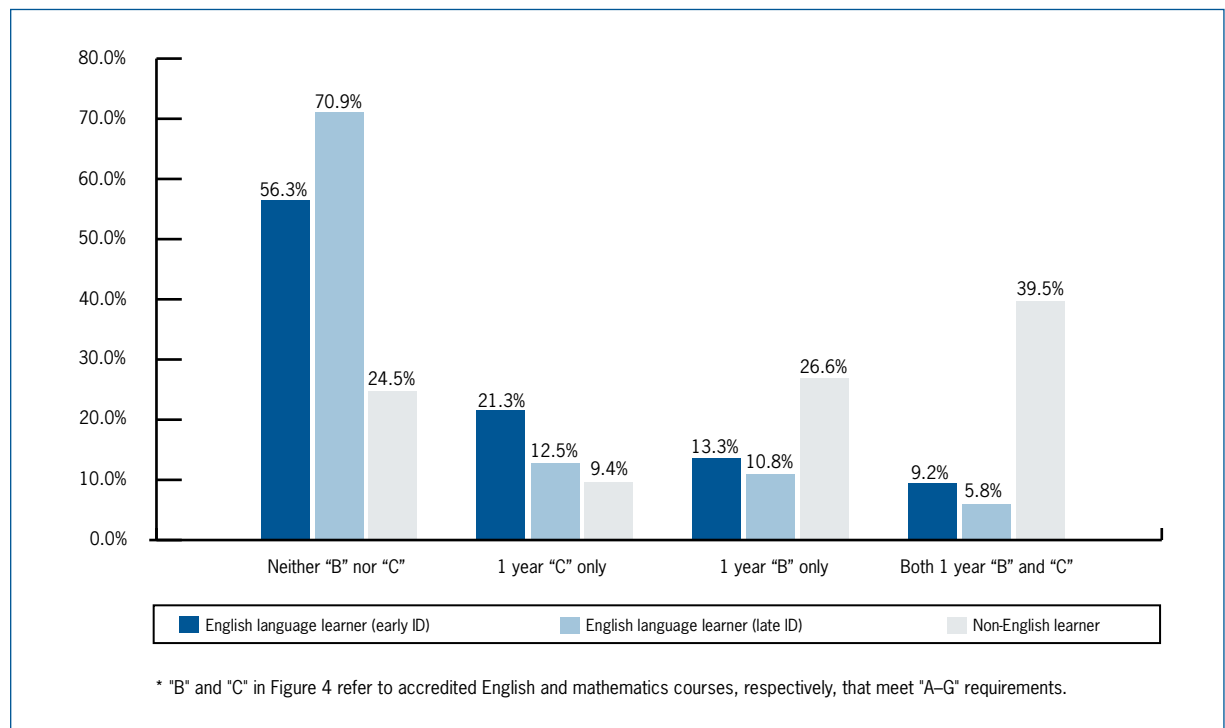


Table 7. Completion of English and Mathematics Courses by the End of 9th Grade

Completion Status	Number of English language learners (early ID) (%)	Number of English language learners (late ID) (%)	Number of Non-English learners (%)
Neither English nor mathematics courses	2,155 (56.3)	584 (70.9)	9,855 (24.5)
1 year of mathematics only	815 (21.3)	103 (12.5)	3,771 (9.4)
1 year of English only	508 (13.3)	89 (10.8)	10,687 (26.6)
1 year of both English and mathematics	352 (9.2)	48 (5.8)	15,846 (39.5)

Figure 4. Completion of English and Mathematics Courses by the End of 9th Grade*



Meeting CSU subject requirements by the end of 12th Grade

The final section of analysis builds from the 9th-grade completion patterns to the high school senior year. The TES dataset includes a set of status flags that allowed us to examine the extent to which students completed the 15 required A–G units by the end of their senior year. Students are noted as “on track” when the course units are completed and they have earned a grade of “C” or better in each of the 15 units. Students who have completed 13 units or more but less than 15 units are noted as “subject borderline” (Tables 8 and 9 and Figures 5 and 6).

Overall, 18.7% of 12th-grade students met the A–G subject requirements of CSU. Non-English learners met the requirements of CSU A–G subjects at a higher percentage than English language learners (early ID) (20.0% vs. 8.7%) and English language learners (late ID) (20.0% vs. 3.4%). This difference is statistically significant at the 5% level.

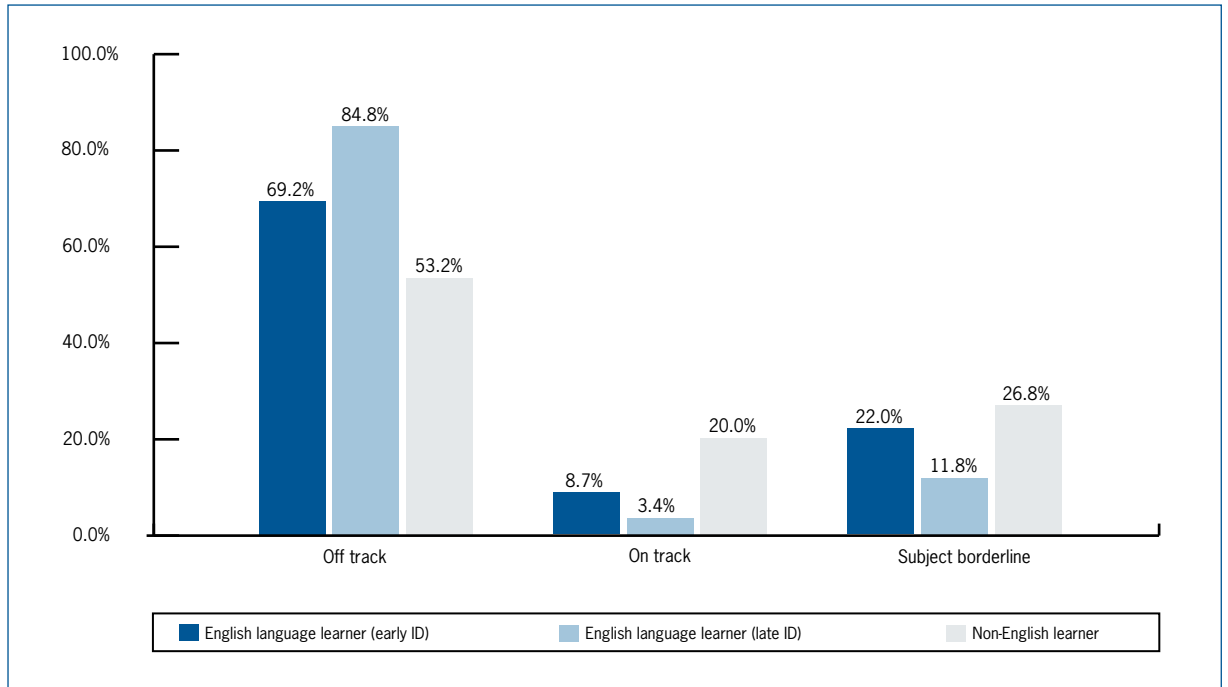
Table 8. Overall Tabulation of Data: Track Status

Track of Subject (CSU)	Number of Students	Percentage
Off track	24,723	55.2%
On track	8,396	18.7%
Subject borderline	11,694	26.1%
Total	44,813	100.0%

Table 9. Track Status, by Subgroups of ELLs

Track of Subject (CSU)	Number of English language learners (early ID) (%)	Number of English language learners (late ID) (%)	Number of Non-English learners (%)
Off track	2,652 (69.2)	699 (84.8)	21,372 (53.2)
On track	334 (8.7)	28 (3.4)	8,034 (20.0)
Subject borderline	844 (22.0)	97 (11.8)	10,753 (26.8)

Figure 5. On-Track Status, by Subgroups of ELLs

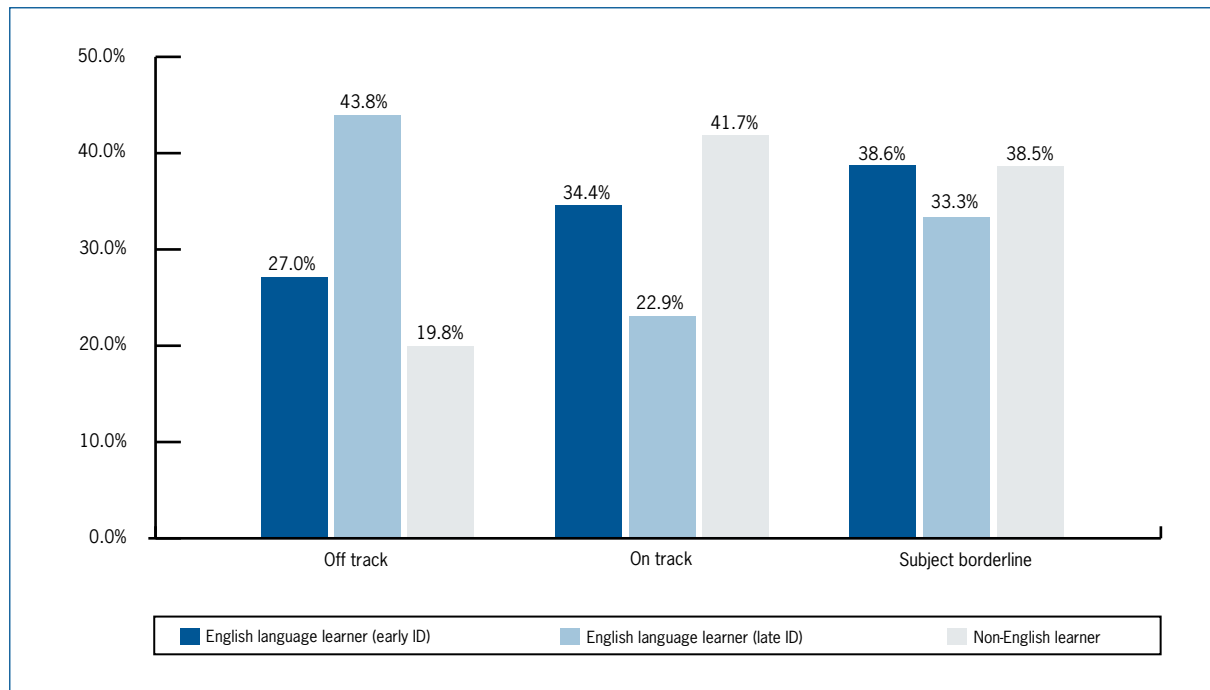


Based on the analysis of overlaps between English and mathematics courses among students who completed both 1 year of English and 1 year of mathematics by the end of 9th grade, non-English learners met CSU A–G subject requirements at a higher percentage than English language learners (early ID) (41.7% vs. 34.4%) and English language learners (late ID) (41.7% vs. 22.9%), as evidenced in Table 10 below. Both differences are statistically significant at the 5% level.

Table 10. Track Status of ELLs Among Course Overlaps
(Completed 1 Year of English and Mathematics Courses by the End of 9th Grade)

Track of Subject (CSU)	Number of English language learners (early ID) (%)	Number of English language learners (late ID) (%)	Number of Non-English learners (%)
Off track	95 (27.0)	21 (43.8)	3,143 (19.8)
On track	121 (34.4)	11 (22.9)	6,603 (41.7)
Subject borderline	136 (38.6)	16 (33.3)	6,100 (38.5)

Figure 6. Track Status of ELLs Among Course Overlaps (Completed 1 Year of English and Mathematics Courses by the End of 9th Grade)



CONCLUSIONS

This analysis has examined the relationship between course-taking patterns in high school for ELLs in a subset of schools in California. The conclusion is that approximately 8% of ELLs and 20% of non-English learners finish high school having taken the necessary set of required courses to be minimally eligible to attend the CSU system.

The reasons why this pattern occurs are numerous and point to the combination of early preparation for rigorous coursework and additional educational options for ELLs in the schools they attend. Valdes (2004) reports that because of poor performance on standardized assessments, ELLs are placed in remedial courses and judged to be unable to participate in more advanced college preparatory classes. These actions are reinforced by expectations and misinformation: Antonio and Bersola (2004) noted that students in high school—both ELLs and non-ELLs—are often surprised to learn that the low-level courses they have taken do not count as college preparatory credits.

Course-taking patterns that begin before high school as a result of poor performance on assessments and remedial coursework (as noted in the previous paragraph) may continue in the 9th grade with limited completion patterns of a single “couplet” of courses; that is, 1 year of English coupled with 1 year of mathematics. By the time ELLs in this study complete high school, more than 92% will not be able to matriculate to a 4-year state college in California without remediation.

The findings suggest that getting students on track early in high school (i.e., during the 9th grade) by ensuring access to college preparatory coursework in English and mathematics is critical to keeping them on track to fulfilling college entrance requirements. Academic supports should be put in place that allow ELLs to meet such

requirements by high school graduation. The findings in this study suggest that students have a better chance of completing the CSU entrance requirements if they are identified early as being English language learners. The fact that English language learners (late ID) are only about 39% as likely as English language learners (early ID) to complete CSU entrance requirements suggests that early identification is highly important.

In either case, English language learners, regardless of when they are identified, show considerable difficulty fulfilling CSU entrance requirements when compared to non-English learners. The findings here highlight this point, suggesting that more needs to be done to support English language learners' chances of completing college entrance requirements by the end of 12th grade. Strategies designed to support ELLs so that they are classified as fluent in English and able to move into mainstream classes and through advanced coursework are offered in *Educating English Language Learners at the High School Level: A Coherent Approach to District and School-Level Support*, a companion brief published by the National High School Center.

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