California Dropout Research Project
An Affiliated Project of the University of California Linguistic Minority Research Institute
UC Santa Barbara | Gevirtz Graduate School of Education

POLICY BRIEF 14 June 2008

What Factors Predict High School Graduation in the Los Angeles Unified School District?

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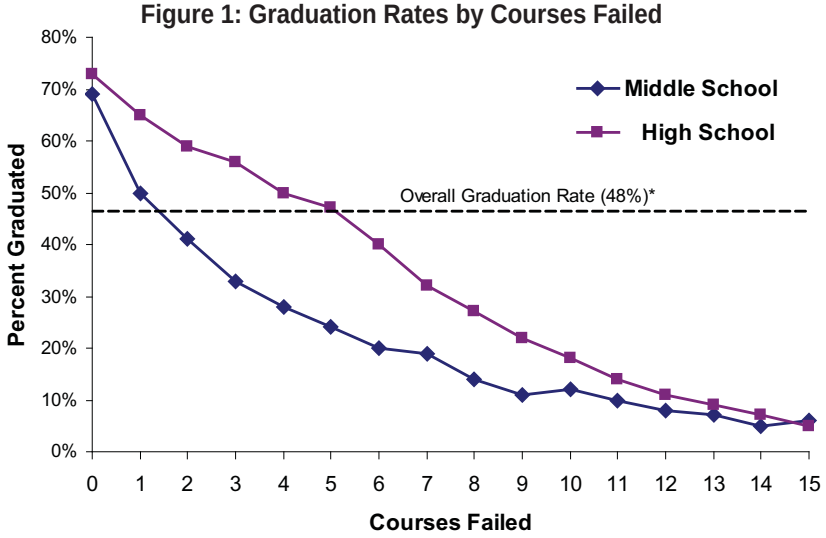
Highlights:

- **In this study, a student's chances of graduating on time from an LAUSD high school were less than 50/50.**
- **Academic experiences explained six times more of the difference in graduation rates among students in this study than demographic characteristics (such as race/ethnicity, gender, language and socio-economic status).**
- **Failing courses, especially Algebra 1, had a severe impact on on-time graduation.**
- **On average, 65% of students in any given Algebra 1 class in LAUSD failed the class.**
- **In 2001-02, more than 25% of 9th graders in LAUSD were retained and did not move on to 10th grade with their peers.**
- **Only one in three students in high schools serving a high concentration of English learners ultimately graduated.**
- **Attending a magnet school more than doubled a student's odds of graduating on time.**

Addressing California's high school dropout crisis requires understanding the academic lives of students. Although the causes of dropping out are many and complex, students' school experiences certainly play a critical role. Because the trajectories leading students either to high school graduation or to dropping out begin *years before* these events, identifying relevant school-related factors requires a comprehensive analysis of data at the district, school, and student levels.

Conducted in collaboration with the Los Angeles Unified School District (LAUSD), this study analyzed district data to track the educational progress of all first-time 9th graders from 6th grade through to their expected graduation in the spring of 2005. This group consisted of 48,561 students who attended 163 LAUSD middle and high schools. Combining transcript records and standardized test scores, together with characteristics of students and their schools, provided valuable insight into the middle and high school factors related to high school persistence and graduation. And because the LAUSD is home to more than 11% of all public school students in the state, most students who transfer still remain in the system, allowing these students to be tracked before *and* after they change schools.

Figure 1: Graduation Rates by Courses Failed



** Graduation rates in this report refer to first-time 9th-graders in September, 2001, who graduated by June, 2005.*

Read the full report at: *lmri.ucsb.edu/dropouts*

► How Many Students Graduated on Time?

A student's chances of graduating on time from an LAUSD high school were less than 50/50. Four years after beginning high school, 48% of the district's first-time freshmen in 2001-02 had graduated.

The loss of students began early. The biggest drop occurred between the 9th and 10th grades, with 34% of first-time freshmen (16,800 students) failing to move on to the 10th grade on time. Seventy-five percent of these students failed to move on because they were *retained* and had to repeat 9th grade. The remaining 25% left the system (dropped out or disappeared—legitimate transfers were excluded from the analysis).

► What Student Characteristics Predict Graduation?

Academic experiences in both middle school and high school explained six times more of the differences in graduation rates among students in this study than did demographic characteristics (such as race/ethnicity, gender, language and socio-economic status).

Failing courses. Of the academic experiences this study explored, failing courses, especially Algebra 1, had a particularly severe impact on the likelihood of graduating on time. Approximately half (49%) of the students failed at least one core academic class (mathematics, English language arts, science, and social science) during their middle school years, and over three-fourths of students (77%) failed at least one academic core course during their high school years.

Students who failed a single high school course graduated 64% of the time, and each successive failure was associated with approximately 10% further reduction in the probability that they graduated. Middle school course failures had an *even greater* negative impact, with each "F" reducing the probability of high school graduation by approximately 20% (*see Figure 1*).

The rate of failure in Algebra is particularly problematic because of the pivotal role that the course has been shown to play as the "gateway" to more advanced mathematics, high school graduation, and postsecondary education opportunities. Students who passed Algebra 1 by the end of their freshman year of high school—only 38% of all students in this study—graduated at twice the rate as students who did not (70% vs. 35%).

As bleak as these statistics are, they actually *understate* the prevalence of failure in many core classes. ***On average, 65% of students in any given Algebra 1 class in LAUSD failed the class.*** The numbers were only slightly better for other courses: 51% fail Geometry A, 49% fail Biology A, 48% fail World History A, and 43% fail English 10A.

In the most troubled schools, the passing rates (not to mention rates of mastery) were even worse. Nonetheless, nearly half of those who failed more than three core courses still managed to graduate on time. In other words, in the right school setting, students with prior academic struggles may still succeed.

Absences. Middle school and high school absences also affected on-time graduation rates: the chance of graduating dropped to less than half for students who were absent more than 10 days/year in 7th or 8th grade or in high school.

Mobility. School mobility matters. Most students remained at one middle school or high school; however, students who changed schools were significantly affected. Only about one-third (35%) of students who changed schools close to the transition to high school (8th grade) graduated on time. Changing schools during the high school years was slightly more detrimental, with only 32% of these students graduating on time.

► What School Characteristics Predict Graduation?

More than three-quarters of the differences in on-time graduation in this study were attributable to schools, meaning that *school* factors were stronger predictors of graduation in LAUSD than *student* factors. Three school characteristics—the percentage of qualified teachers at the school, percentage of English learners, and magnet school status—accounted for nearly half of the differences in graduation rates between schools.

Magnet Schools. Students who attended a magnet high school—a theme-oriented school that students throughout the district may choose to attend—were more likely to graduate (73%) than students who attended other types

of high schools (45%). After controlling for demographic characteristics and academic background, ***attending a magnet school more than doubled a student's odds of graduating on time***.

English learners. Confronting many of the same conditions (e.g., overcrowding, and teacher shortages) that plague racially and economically isolated schools, ***only one in three students attending high schools serving a high concentration of English learners ultimately graduated***. In addition to more limited resources that many of these schools face, staffing for English language learning programs may be severely over-taxed.

Of these school-level conditions, we found evidence of distress at schools serving high concentrations of English language learners; odds of graduating were 40% lower at these schools than at others, controlling for individual language classifications and other demographic and academic characteristics.

Teacher Credentials. Within a school, high concentrations (20% or more) of teachers who are not fully credentialed can cause a series of problems, including a lack of mentors; high turnover of untrained teachers leading to instability and persistent hiring concerns; and a deterioration of professional development.

For students, attending a school with a high concentration of under-qualified teachers increases the student's chance of encountering a teacher who possesses less content area knowledge, relies heavily on lecturing, and is ill-equipped to engage students in higher-order thinking and assignments.

Our study found no direct effect to explain the low (35%) graduation rate at schools where more than 20% of teachers lack full credentials. Rather, the analysis showed that attending schools with more qualified teachers improved the likelihood of graduating for students in three critical risk categories: English learner, low test scores, and middle school academic difficulties.

► What To Do?

Solving the LAUSD's dropout crisis is a formidable challenge that will require a long-term, comprehensive, and multi-faceted strategy to improve all of the district's schools.

Our findings support the idea that schools need to ensure that both the social and academic needs of students are met *prior* to students' entry into the high school environment *and within* the high school setting. To the extent that schools can foresee the risk of dropping out, they can intervene to moderate that risk. In this respect, there is reason for optimism.

The findings from this work, as well as other recent studies, demonstrate that signs that students may need extra attention emerge as early as grade 6, and probably earlier.

Our findings also suggest that increasing graduation rates will require addressing school-level conditions and the resources provided to schools.

The capacity of schools to accommodate large numbers of English learners with high-quality instruction must be improved. A large number of English learners successfully master the English language and are redesignated "*Fully English Proficient*" by the LAUSD. These students graduate at rates well above average. But far too many schools are failing their English learners. We need to understand and address the unique challenges faced by schools with the largest EL populations.

Early Algebra education has appropriately become a key goal in the district. It is undoubtedly a worthy goal, but more must be done to ensure that those who struggle are not lost to the system. ***Students who pass Algebra by 9th grade have drastically improved odds of graduating.***

When up to two-thirds of the district fail critical core high school courses, it suggests a serious problem with the preparation of students in earlier grades. Nonetheless, different schools have vastly different rates of success with similar populations of under-prepared students.

We must look for school conditions that help schools succeed under challenging circumstances. Opportunities that prevail in many magnet schools, such as highly qualified teachers, rigorous academic curriculum, intensive outreach to parents, and clear expectations for graduation and college-going should be made available to *all* students in the LAUSD.

Finally, ***teaching matters*** tremendously. All schools should have fully-credentialed teaching staffs, particularly those serving English learners and students with histories of low achievement on coursework and on standardized tests.

Research Reports and Policy Briefs in Print

1. The Economic Losses from High School Dropouts in California *(August 2007)*
2. The Return on Investment for Improving California's High School Graduation Rate *(August 2007)*
3. Does State Policy Help or Hurt the Dropout Problem in California? *(October 2007)*
4. Can Combining Academic and Career-Technical Education Improve High School Outcomes in California? *(November 2007)*
5. Student and School Predictors of High School Graduation in California *(December 2007)*
6. California Schools that Beat the Odds in High School Graduation *(December 2007)*
7. Alternative Pathways to High School Graduation: An International Comparison *(January 2008)*
8. Giving a Student Voice to California's Dropout Crisis *(March 2008)*
9. Building System Capacity for Improving High School Graduation Rates in California *(April 2008)*
10. Improving California's Student Data Systems to Address the Dropout Crisis *(May 2008)*
11. Struggling to Succeed: What Happened to Seniors Who Did Not Pass the California High School Exit Exam? *(June 2008)*
12. Can Middle School Reform Increase High School Graduation Rates? *(June 2008)*
13. Middle School Predictors of High School Achievement in Three California School Districts *(June 2008)*
14. What Factors Predict High School Graduation in the Los Angeles Unified School District? *(June 2008)*

Forthcoming

15. Why Students Drop Out of School

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The James Irvine Foundation
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