CRESST REPORT 815

EVALUATION OF GREEN DOT'S LOCKE TRANSFORMATION
PROJECT: FINDINGS FOR COHORT 1 AND 2 STUDENTS

MAY, 2012

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CRESST

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EXECUTIVE SUMMARY

In the fall of 2007, Alain Leroy Locke High School, historically one of California's lowest performing secondary schools, began its transition into a set of smaller, Green Dot Charter High Schools. Green Dot's goals for the transformation effort were clear: to create high performing, urban schools where all young adults receive the education they need to be prepared for college, leadership, and life. With a grant from the Bill and Melinda Gates Foundation, the National Center for Research on Evaluation, Standards and Student Testing (CRESST) was charged with monitoring the progress and effects of the Green Dot Public Schools' Locke transformation.

The Green Dot Locke (GDL[1]) transition began with two small, off-site schools and was completed in Fall, 2008, when Green Dot assumed full responsibility for the existing Locke campus, the total neighborhood catchment area, and the full student community, grades 9-12. Based on the two cohorts of 9th grade students who entered GDL in 2007 and 2008 respectively, CRESST used a range of student outcomes to monitor the progress of the GDL transformation. The study employed a strong quasi-experimental design with propensity score matching. Entering GDL students and comparison students from demographically similar neighborhood high schools were carefully matched on their 8th grade achievement and demographics.

Analyses revealed consistent, positive effects for the GDL transformation: Results suggested that GDL students performed better on multiple indicators than they would have if they had attended a demographically comparable LAUSD high school. Statistically significant, positive effects generally were more prevalent for Cohort 2, who started as 9th graders in 2008-2009, than for Cohort 1, who started in 2007-2008 prior to GDL's complete transition. For example, compared to control students, Cohort 2 GDL students were more likely to:

- persist in school over time;
- take and pass key 9th, 10th, and 11th grade college preparatory courses;
- take and pass a total of eight or more key college preparatory courses;
- score higher on the California High School Exit Examination (CAHSEE) on their first attempt;
- pass the English Language section of the CAHSEE on their first attempt; and

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[1] Throughout this report, Green Dot Locke (GDL) refers to the Green Dot Locke High School Transformation Project.

- pass both the English Language and mathematics sections of the CAHSEE by the end of 11th grade.

Moreover, GDL students' performance on California Standards Tests (CST) was promising; virtually every descriptive comparison favored GDL students. Statistically significant differences were found for the GDL Cohort 2 students in mathematics.

GDL results are particularly impressive in light of GDL's Cohort 2 increased persistence rates. That is, the higher persistence rates may suggest that GDL is retaining more, lower performing students who otherwise might have dropped out, yet still is maintaining an advantage in CST scores. Further, even as GDL Cohort 2 shows more statistically significant, positive effects than does Cohort 1, Cohort 1 graduation and college readiness rates, as judged by A-G completion, are impressive. For students who remained at their schools for four years, the GDL graduation rate was 24 percentage points higher than that for the comparison group. Further, the college readiness rate was 34 percentage points higher for GDL graduates than for comparison group graduates (Cohort 2 students were in 11th grade and had not yet progressed to graduation at the time of the study).

In conclusion, Green Dot Public School's transformation of Alain Leroy Locke High School is an impressive success story in many ways. First, previous charter school evaluations have rarely found such consistent, positive effects on a range of student outcomes using semi quantitatively rigorous methods. Secondly, GDL accomplished positive effects on student achievement while maintaining a student population similar to its original population prior to transformation and to the control schools used in the study. Lastly, given the pattern of increasingly positive results for Cohort 2 students, deeper results may well materialize for successive cohorts and as Cohort 2 students progress through high school and graduation. As GDL's story progresses, future chapters on additional cohorts of students may further solidify the evidence base.

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FINDINGS FOR COHORT 1 AND 2 STUDENTS

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Abstract

With funding from the Bill and Melinda Gates Foundation, CRESST conducted a multi-year evaluation of a major school reform project at Alain Leroy Locke High School, historically one of California's lowest performing secondary schools. Beginning in 2007, Locke High School transitioned into a set of smaller, Green Dot Charter High Schools, subsequently referred to as Green Dot Locke (GDL) in this report. Based on 9th grade students who entered GDL in 2007 and 2008 respectively, CRESST used a range of student outcomes to monitor progress of the GDL transformation. The CRESST evaluation, employing a strong quasi-experimental design with propensity score matching, found statistically significant, positive effects for the GDL transformation including improved achievement, school persistence, and completion of college preparatory courses.

Introduction

In 2007, community leaders and school staff came together with Green Dot Public Schools to request that Green Dot be given operational control of Alain Leroy Locke High School, historically one of the lowest performing secondary schools in the Los Angeles Unified School District (LAUSD), as well as in the state of California. With the LAUSD's Board of Education's approval, the Locke Transformation Project marked the first time an outside organization was granted authority to operate an existing district school. The transition from a large, urban high school to a set of smaller, Green Dot Charter High Schools commenced in fall 2007 and was completed in fall 2008, with the opening of eight, small college preparatory academies committed to becoming high performing high schools where all young adults receive the education they need in order to be prepared for college, leadership, and life.

With funding from the Bill and Melinda Gates Foundation, the National Center for Research on Evaluation, Standards, and Student Testing (CRESST) was charged with monitoring the progress of the GDL transformation. The current report marks year 3 of the CRESST effort and summarizes results showing the effects of the GDL transformation on students who started as 9th graders in 2007-08 and in 2008-09. The CRESST study used a

quasi-experimental design and examined how GDL students performed on a range of outcomes across multiple years compared to groups of carefully matched control students attending demographically similar high schools in LAUSD. A second companion report will examine the intersection of teacher quality and GDL effects. The second report uses available teacher data and the results of interviews with teachers and administrators who were at Locke both prior and subsequent to the transformation. Our goal is to gather professional perspectives on teacher recruitment, retention, and support.

In the remainder of this introduction, we delineate Green Dot Public Schools' goals and approach, then present a brief summary of previous studies on charter schools. After presenting our evaluation question and methodology, we share the results. The concluding section cites possible limitations of our study, summarizes major findings, and proposes a set of recommendations.

Green Dot Goals and Approach

Green Dot Public Schools proposed to use its prior success in creating small community high schools to serve previously low performing students in Los Angeles in order to fuel a massive transformation at Locke. The effort was groundbreaking in many respects: Green Dot's alliance with LAUSD; the dramatic scale-up (requiring the take over of a large existing public high school and its entire catchment area) relative to Green Dot's prior small-school efforts; and the following ambitious goals:

- All Locke students will receive the education they deserve to be successful in college and life.
- Locke students will become true change agents and come back to transform South Los Angeles and Watts.
- Locke will become a successful urban public high school and will raise the bar for urban schools across the country.

Green Dot's model for accomplishing such ambitious goals is based on its six basic tenets of high performing schools (see Table 1). Green Dot emphasizes a strong partnership with diverse stakeholders—including parents, the community, and LAUSD—to implement its tenets.

The Green Dot model also includes recommended practices, which are the organization's distillation of best practices that should inform principals' and teachers' decision-making in fulfilling the tenets. The recommended practices are intended to help standardize superior educational methods in all curriculum and operational areas across Green Dot charter schools.

Table 1

Green Dot Public Schools' Six Basic Tenets

#	Tenet
1.	Small, safe, personalized schools
2.	High expectations for all students
3.	Local control with extensive professional development and accountability
4.	Parent participation
5.	Maximize funding to the classroom
6.	Keep schools open later

Brief Summary of Previous Studies on Charter Schools

Numerous studies argue both the positive and negative effects of charter schools' achievement on student academic achievement (Abdulkadiroglu et al., 2009; Therriault, Gandhi, Casasanto, & Carney, 2010, Tuttle, Teh, Nichols-Barrer, Gill, & Gleason, 2010; Manuel, 2002; Cobb & Suarez, 2000; Zimmer et al., 2009). The following two studies exemplify available charter schools' effects on student achievement:

Hoxby's (2004) study included data from 99% of the nation's charter schools. The study found that charter school students are 4% more likely to be proficient in reading and 2% more likely to be proficient in math on their state exams. However, Hoxby's (2004) evaluation has been faulted for inadequately controlling for students' background, as the positive charter effect noted by Hoxby disappears after controlling for racial composition and income level (Roy & Mishel, 2005).

The recent study by Mathematica Policy Research and Center on Reinventing Public Education (Furgeson, et al., 2011) focused on 22 Charter Management Organizations (CMOs) that managed at least one middle school and for whom sufficient state and district data were obtained to analyze student impacts as of Fall 2007. The authors primarily used quasi-experimental methods; however, they also employed a randomized experimental design for a subset of schools for which lottery data were available in order to validate the quasi-experimental design. The results from the two approaches (quasi-experimental and experimental) were very similar, thereby reinforcing the study's findings. Each found that CMO students made gains relative to the control students but none were statistically significant. The study also reveals wide variation in student impact across CMOs, with some

CMOs producing large and significant achievement gains relative to traditional schools, and others having a negative impact on student achievement.

Additionally, when compared to public schools in their local contexts, charter schools have been found to be less racially diverse than their neighboring public counterparts (Zimmer et al., 2008; Frankenberg & Lee, 2003; Manuel, 2002; Wells et al., 2000; Ascher et al., 1999; Cobb & Glass, 1999).

Evaluation Methodology

The current report extends the findings of prior CRESST GDL evaluation reports to incorporate another year (2010-11) of student data for Cohort 1 and Cohort 2 students. In this section, we describe the evaluation question that guided our work, the available data, and approaches to analysis.

Evaluation Question

The current report addresses the following overarching question:

> Relative to their matched counterparts in LAUSD, how well are Cohort 1 and 2 students performing in terms of school persistence, attendance, course-taking and completion, A-G completion rate, graduation rate, as well as achievement on standardized tests in ELA and math in 2010-11?

Available Data

Data available to the general public as well as student-level data (acquired from LAUSD and Green Dot) were used for the current report. Public data were retrieved from several California Department of Education (CDE) websites (e.g., DataQuest). Student-level data were requested and received from Green Dot and LAUSD (for local school districts 5, 7, 8, and T) for 2006-07, 2007-08, 2008-09, 2009-10, and 2010-11. In addition to demographic data, student outcome data included:

- **School Persistence.** For a given school to have a significant influence on student achievement, it must be able to keep its students enrolled. This is particularly true for populations of students with a history of high dropout rates and low graduation rates.

- **School Attendance.** While the analysis of school persistence examines whether students stayed enrolled in the same school over time, the degree to which students attend school when enrolled also is critical.

- **Course-taking.** We are further interested in knowing the courses in which students are enrolled and the extent to which students are succeeding in completing the courses needed to be college ready.

- **Student Achievement.** Multiple measures of student learning are of interest, including students' performance on the California Standards Test [CST] and on the California High School Exit Examination [CAHSEE] in English language arts and math.
- **End-of-High School Measures.** CRESST further examined student achievement based on A-G course completion and graduation rate. 2010-11 marks the first year Cohort 1 students from GDL have had four years of Green Dot exposure.

Analysis Strategies

A quasi-experimental design was used to examine the transformation effects on GDL students. The two cohorts of students under analysis were:

- Cohort 1: Students who started as 9th graders in fall 2007 at two off-site small schools, reflecting only a small proportion of the total Locke high school population, and
- Cohort 2: Students who started as 9th graders in fall 2008, reflecting the entire Locke high school 9th grade student population

To estimate how GDL students would have performed on the various outcome measures in the absence of the GDL transformation, we matched GDL students to non-GDL students from the same neighborhoods with similar 8th grade characteristics and academic performance. We chose similar students from neighboring LAUSD high schools serving the same feeder middle schools as GDL. By matching students based on their 8th grade characteristics, we could rule out concerns that differences in outcomes between the matched GDL and control students were due to measured pre-existing differences between GDL and control students. As with most non-randomized designs, however, we could not fully rule out concerns that group differences were due to unobserved student characteristics (e.g., motivation) rather than the GDL transformation.

Appendix A presents demographic characteristics and achievement information for the freshmen at GDL, freshmen at GDL who attended the feeder middle schools, freshmen at the control high schools, and freshmen at the other LAUSD schools for both Cohort 1 and Cohort 2. As shown in these tables, we found that Cohort 1 and 2 GDL students were very similar to Locke's demographic profile prior to the GDL transformation, as well as to control students who attended the three control high schools in LAUSD. Both GDL freshman cohorts were almost entirely Latino or African American; they were likely participants in the National School Lunch Program (NSLP); and a large proportion of these students were classified as English learners (ELs). 8th grade California Standards Test (CST) scores for entering GDL students clearly demonstrate the academic challenge of the transformation. The majority of incoming GDL freshman in Cohorts 1 and 2 scored below basic or far below

basic on the mathematics and the ELA sections of the CST. Furthermore, entering GDL students performed similarly to students who attended the three control high schools.

To maximize the number of cases available for analysis, the sample used for the quasi-experimental design differed depending on which outcome measure was being examined. For the student persistence outcome, students of interest were those enrolled in high school as 9th graders in the fall semester and whose 8th grade CST scores were available. For Cohort 1 students, for example, the analysis was based on students who were 9th graders in 2007-08. We then explored whether these freshmen students who started in 2007-08 remained with GDL schools in the following years, compared to the matched control group of students who enrolled in LAUSD schools.

For other student outcome measures—namely attendance, course-taking and completion, as well as CST and CAHSEE performance—we defined the student population of interest as those who had 8th grade CST scores available; were enrolled as 9th graders in the subsequent fall; and had course-taking information for both the fall and spring semesters for the given year with the exception of 12th grade where the CST was not administered. For example, the year 3 achievement outcomes for Cohort 1 students were based on students for whom we had: (1) 8th grade CST data on both ELA and math in 2006-07, (2) course-taking information for the fall and spring semesters of 2007-08, (3) course-taking information for the fall and spring semesters of 2008-09, and (4) CST data on both ELA and math as well as course-taking information for the fall and spring semesters of 2009-10. There were four years of outcome data for Cohort 1 students and three years of outcome data for Cohort 2 students. Table 2 summarizes the cohort definitions for each of the cohorts and outcome types.

Table 2

Definition of Green Dot Locke Students for Analysis of Outcomes, by Cohort

Outcomes	2006-07			2007-08			2008-09			2009-10			2010-11		
	Course enrollment			Course enrollment			Course enrollment			Course enrollment			Course enrollment		
	Fall	Spring	CST	Fall	Spring	CST	Fall	Spring	CST	Fall	Spring	CST	Fall	Spring	CST
Cohort I															
Persistence			√*	√											
Year 1			√*	√	√	√									
Year 2			√*	√	√		√	√	√						
Year 3			√*	√	√		√	√		√	√	√			
Year 4													√	√	
Cohort 2															
Persistence						√*	√								
Year 1						√*	√	√	√						
Year 2						√*	√	√		√	√	√			
Year 3													√	√	√

Note. Year 1 Outcomes: ELA CST, Math CST, School Attendance Rate, Passed Key Courses with C or above. Year 2 Outcomes: ELA CST, Math CST, ELA CAHSEE, Math CAHSEE, School Attendance Rate, Passed Key Courses with C or above. Year 3 Outcomes: ELA CST, Math CST, School Attendance Rate, Passed Key Courses with C or above. *The CST scores had to be from 8th grade and from a non-GDL school.

We used the same method to identify a pool of possible matching control students for matching who attended one of three control high schools: Fremont, Jordan, or Washington Preparatory. The three control high schools were identified as the LAUSD high schools that most students in the Locke feeder middle schools attended if they did not attend GDL. Students also had to meet the 8th grade and outcome data requirements discussed previously.[2] From this available pool of non-GDL students, control students were selected by matching them to GDL students on a number of demographic and academic performance measures. A nearest-neighbor propensity score method was implemented via the MatchIt package for R (Ho, Imai, King, & Stuart, 2009). Separate matches were made for the various cohorts and student outcome measures. We identified a total of nine groups of control students by cohort, year, and student outcome measures.

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[2]Our initial pool of possible control students included those students enrolled in LAUSD's local school districts 5, 7, and 8 during their 8th grade year.

As outlined in Table 2, there are five groups for Cohort 1: 2008-2011 school persistence, 2008 end-of-year outcomes, 2009 end-of-year outcomes, 2010 end-of-year outcomes, and 2011 end-of-year outcomes. Four groups are included in Cohort 2: 2009-2011 school persistence, 2009 end-of-year outcomes, 2010 end-of-year outcomes, and 2011 end-of-year outcomes. We re-matched at each time point to make sure we compared similar students at each period to maximize the compatibility of students.

To construct a control group with characteristics similar to the GDL cohorts, students in each cohort were matched exactly on gender, ethnicity, parents' education, poverty status, language classification, 8th grade CST math subtest taken, and whether or not they attended a GDL feeder middle school. Feeder middle schools were defined as schools having at least five students in the first GDL 9th grade cohort and at least ten students in the second cohort. The following six middle schools were identified as Locke feeder middle schools: Bethune, Clay, Drew, Gompers, Harte, and Markham. Within each exact match, a control student was identified for each treatment student based on nearest-neighbor propensity score matching (where the estimated propensity score was determined by the student's 8th grade CST scale scores for ELA and math as well as the student's 8th grade attendance rate).

The matching process produced treatment (i.e., GDL students) and control (i.e., non-GDL students) groups with identical student characteristic profiles and nearly identical average 8th grade CST and attendance records[3]. Student characteristics for Cohort 1 and Cohort 2 are presented in the next section of the report under Cohort Profiles. The characteristics profiles were separated by matching cohort (i.e., persistence, year 1 outcomes, or year 2 outcomes) and group (i.e., GDL or non-GDL). Therefore, there were five sets of matching data for Cohort 1 and four sets of matching data for Cohort 2. For example, for Cohort 2, the first was the school persistence measure (565 GDL students), the second was the analysis of year 1 outcomes in 9th grade (489 GDL students), the third was the analysis of year 2 outcomes in 10th grade (393 GDL students), lastly there was the additional matching data for the analysis of year 3 outcomes in 11th grade (311 GDL students).

The Cohort 2 persistence cohort had 565 of the 633 treatment students matched to 565 control students. Note that 91% of the matched students came from one of the Locke feeder middle schools, which suggested we were comparing students who came from similar middle schools with similar characteristics. The matched groups both had average 8th grade ELA CST scale scores of 294. The average CST math scale scores only differed by three to five

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[3] The matched treatment students are subsamples of the pools of students who met the requirements for matching. For Cohort 1, 95% or more GDL students who met the matching requirements were matched depending on the year of analysis and the outcome; for Cohort 2, it is between 82% to 89% for GDL students.

scale score points, depending on the specific math test taken in 8th grade. The same proportion of the matched GDL and control students took the Algebra 1 CST (49%) and the General Math CST (51%) in 8th grade.

It should be noted that while matching among only those students who remain at their schools helps to reduce bias in the estimated treatment effects on the outcomes other than persistence, the strategy may introduce other biases. If GDL students persist longer in school than control students and if lower performing students are least likely to persist, then this means that the GDL group is likely to include more relatively low performing students than the control group—and can thus be disadvantaged.

Effects of GDL on Student Performance

In this section, we present cohort profiles including student background data and 8th grade CST ELA and math test results, plus both descriptive mean results and estimates of GDL effects over time for our matched group of students on the various outcome measures. While we employed a quasi-experimental design based on propensity score matching method to adjust for pre-existing differences between GDL and control students—our estimates of GDL effects can only be as good as the available data. If important differences between GDL and non-GDL students are not captured by the available data collected and provided, then the estimates will be biased. In the absence of random assignment of students to GDL and non-GDL schools, we believe our methodological approach is as sound as possible.

Cohort Profiles

As discussed earlier in the data and methodology section, feeder middle schools are those six schools that the majority of GDL students attended in their eighth grade year. Control high schools (Fremont, Jordan, and Washington Preparatory) are the top three high schools attended by students from the feeder middle schools. We considered these three control schools as the likely schools that GDL students would have attended if they did not attend GDL.

Tables 3 and 4 reflect student characteristics for Cohorts 1 and 2 compared to their matched counterparts at the three LAUSD control high schools, respectively. As shown in these tables, GDL students who attended the feeder middle schools had demographic characteristics similar to control school students who also attended the same feeder middle schools. For example, in both cohorts of GDL and control schools, African American and Latino students comprised 99% to 100% of the student body. Special Education students represented 5% to 10% of the GDL and control school students; the percentage decreases as students progress through high school.

Table 3

Cohort 1: Comparison of Matched Non-Green Dot Locke & Green Dot Locke Students by 8th Grade Characteristics

Characteristics	Persistence		Year 1		Year 2		Year 3		Year 4	
	Non-GD	GD	Non-GD	GD	Non-GD	GD	Non-GD	GD	Non-GD	GD
Number of students in cohort	-	198	-	171	-	127	-	99	-	86
Number of matched students	193	193	165	165	121	121	94	94	83	83
% From feeder MS	86%	86%	86%	86%	87%	87%	86%	86%	87%	87%
% Female	52%	52%	53%	53%	52%	52%	52%	52%	54%	54%
Race/Ethnicity (%):										
Black / Afr. Am.	21%	21%	18%	18%	15%	15%	7%	7%	8%	8%
Latino / Hispanic	79%	79%	82%	82%	85%	85%	93%	93%	92%	92%
Parent's education (%):										
High school graduate	22%	22%	22%	22%	22%	22%	22%	22%	23%	23%
Less than high school	24%	24%	22%	22%	27%	27%	31%	31%	28%	28%
Unknown	53%	53%	56%	56%	50%	50%	47%	47%	49%	49%
% Free/reduced lunch	84%	84%	84%	84%	88%	88%	88%	88%	87%	87%
Language classification (%):										
English Only or IFEP	24%	24%	22%	22%	17%	17%	10%	10%	11%	11%
RFEP	30%	30%	32%	32%	37%	37%	40%	40%	41%	41%
English Learner	46%	46%	46%	46%	45%	45%	50%	50%	48%	48%
% Students w/ disabilities	9%	9%	8%	8%	8%	8%	7%	7%	5%	5%
Mean attendance rate	95%	95%	96%	96%	97%	96%	96%	96%	97%	96%
Mean ELA CST scale score	286	290	290	290	294	293	290	293	291	295
Took Algebra 1 CST:										
% Took test	52%	52%	54%	54%	60%	60%	62%	62%	61%	61%
Mean scale score	273	275	275	275	274	274	271	276	269	276
Took General Math CST:										
% Took test	48%	48%	46%	46%	40%	40%	38%	38%	39%	39%
Mean scale score	278	274	275	275	283	275	280	274	285	275

Table 4

Cohort 2: Comparison of Matched Non-Green Dot Locke & Green Dot Locke Students by 8th Grade Characteristics

Characteristics	Persistence		Year 1		Year 2		Year 3	
	Non-GD	GD	Non-GD	GD	Non-GD	GD	Non-GD	GD
Number of students in cohort	-	633	-	570	-	460	-	381
Number of matched students	565	565	489	489	393	393	311	311
% From feeder MS	91%	91%	91%	91%	92%	92%	93%	93%
% Female	52%	52%	52%	52%	50%	50%	51%	51%
Race/Ethnicity (%):								
Black / Afr. Am.	26%	26%	24%	24%	20%	20%	18%	18%
Latino / Hispanic	74%	74%	76%	76%	80%	80%	82%	82%
Parent's education (%):								
High school graduate	26%	26%	28%	28%	28%	28%	29%	29%
Less than high school	30%	30%	29%	29%	32%	32%	33%	33%
Unknown	44%	44%	43%	43%	40%	40%	38%	38%
% Free/reduced lunch	88%	88%	88%	88%	89%	89%	91%	91%
Language classification (%):								
English Only or IFEP	32%	32%	29%	29%	25%	25%	23%	23%
RFEP	33%	33%	34%	34%	37%	37%	39%	39%
English Learner	35%	35%	37%	37%	38%	38%	39%	39%
% Students w/ disabilities	8%	8%	8%	8%	7%	7%	6%	6%
Mean attendance rate	94%	94%	94%	94%	95%	95%	96%	96%
Mean ELA CST scale score	294	294	293	293	297	296	299	302
Took Algebra 1 CST:								
% Took test	49%	49%	51%	51%	53%	53%	56%	56%
Mean scale score	279	282	281	284	283	286	286	288
Took General Math CST:								
% Took test	51%	51%	49%	49%	47%	47%	44%	44%
Mean scale score	270	275	273	270	270	270	276	278

Note. Results are for students in the matched sample for the given cohort each year.

Analysis of the ELA and math CST scores demonstrated that GDL students and control high school students from the same feeder middle schools were similar based on their eighth grade CST results. In both cohorts, a low percentage of students scored basic, proficient, or advanced on the Algebra 1 or General Math CST. Both groups performed better on the ELA

exam than the math; however, the percentage of students achieving basic, proficient, or advanced levels of proficiency on the ELA section was still very low. As with the demographic variables, the eighth grade CST test scores for GDL students and control school students were more alike than students who attended other LAUSD high schools. Students who attended other LAUSD high schools came into the ninth grade with higher eighth grade math and ELA scores. (see Tables A3 and A4 for breakdown of CST scale scores and percent of students who scored basic, proficient, or advanced by cohort.)

We report the cohort-specific descriptive results for cohorts 1 and 2 students on the same set of student outcome measures in Appendix B. Descriptive analyses sought to provide information of how the two cohorts of students at GDL and the three LAUSD control high schools performed on various student outcomes. The analysis is based on the original cohorts of 9th graders who started at GDL and the control high schools in 2007-08 for Cohort 1 students and in 2008-09 for Cohort 2 students.

Appendix C has the school-level descriptive results for API, school enrollment, school persistence, attendance, course enrollment and completion, as well as on standardized tests over time for both GDL and control schools. We extended the corresponding results reported in the previous report by incorporating the newly available 2010-11 results.

School Persistence

While we do not have the data necessary to identify school dropouts, we can identify students who remained at the same high school over time using the semester course-taking data. We followed the two cohorts from the end of the fall of their freshman year until the end of spring of 2011 to identify students who remained at the same school each semester during this period.

Results from the school persistence analysis are presented in Table 5 by cohort and semester for the matched samples. The control group column reports the number of students in the control group cohort and the proportion of students in that cohort who were still enrolled in the same school in a given semester. The GDL group column reports the same statistics for the GDL students. The difference between the control group and GDL proportions are reported in the raw difference column with the *p*-value (statistical significance) in parentheses. The adjusted difference column reports the estimated difference and *p*-value for a student with an average ELA CST 8th grade scale score. The adjusted difference column provides our best estimate of the effect of the GDL transformation on persistence. These effect estimates are also summarized in Figure 1 with their approximate

95% confidence intervals. Estimates with a confidence interval that does not intersect with the zero line are considered statistically significant.

Table 5

Estimated Effect of Green Dot Locke on Proportion of Students Staying in Same School, by Semester (Matched Sample)

Year/Semester	Control Group		Green Dot Group		Raw Difference		Adjusted Difference*	
	N	Mean	N	Mean	Estimate	(p-value)	Estimate	(p-value)
Cohort 1								
Year 1 Fall	193	1.00	193	1.00	0.00		0.00	
Year 1 Spring	193	0.92	193	0.88	-0.04	(0.173)	-0.04	(0.169)
Year 2 Fall	193	0.80	193	0.75	-0.05	(0.274)	-0.05	(0.240)
Year 2 Spring	193	0.72	193	0.72	-0.01	(0.910)	-0.01	(0.825)
Year 3 Fall	193	0.62	193	0.59	-0.03	(0.533)	-0.04	(0.451)
Year 3 Spring	193	0.58	193	0.55	-0.03	(0.609)	-0.03	(0.501)
Year 4 Fall	193	0.50	193	0.52	0.02	(0.685)	0.01	(0.804)
Year 4 Spring	193	0.49	193	0.49	0.00	(1.000)	-0.01	(0.846)
Cohort 2								
Year 1 Fall	565	1.00	565	1.00	0.00		0.00	
Year 1 Spring	565	0.90	565	0.94	0.04	(0.012)	0.04	(0.012)
Year 2 Fall	565	0.77	565	0.83	0.06	(0.015)	0.06	(0.015)
Year 2 Spring	565	0.71	565	0.79	0.08	(0.003)	0.08	(0.003)
Year 3 Fall	565	0.63	565	0.71	0.09	(0.000)	0.09	(0.002)
Year 3 Spring	565	0.60	565	0.65	0.06	(0.057)	0.05	(0.060)

Note. Results are for students in the matched sample for a given cohort. The reported estimates are the calculated probabilities based on the coefficients generated from the logistic regression analysis. *The adjusted difference controls for a student's 8th grade ELA CST scale score.

School Persistence
Estimated Green Dot Effect on Persistence Rate

COHORT 1
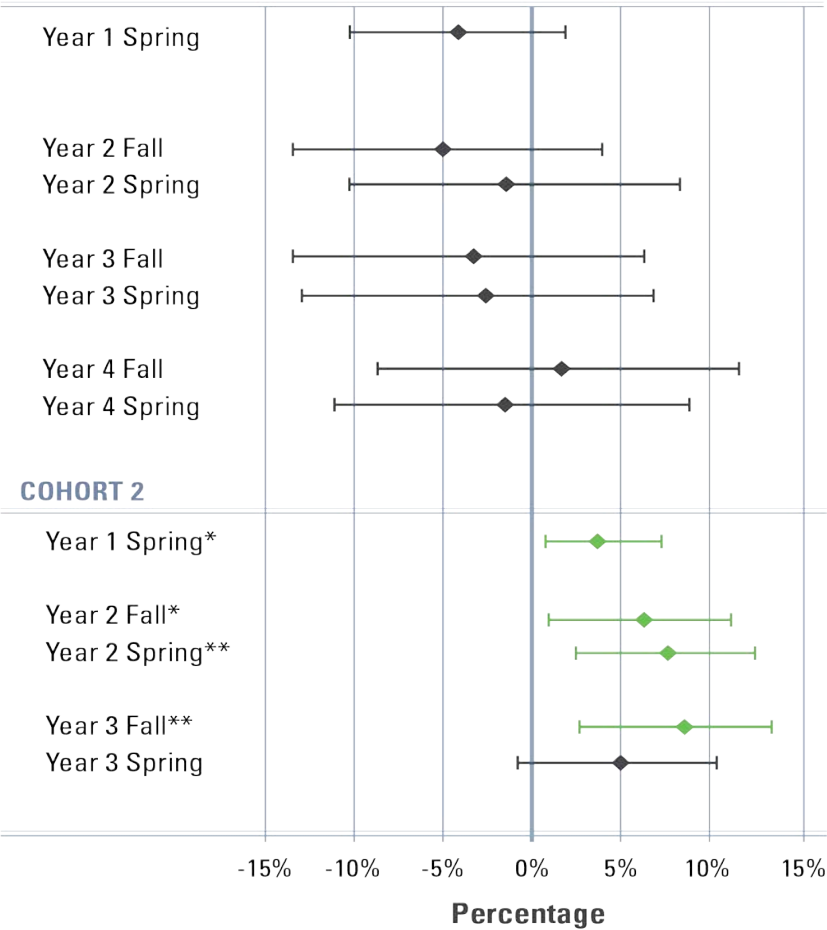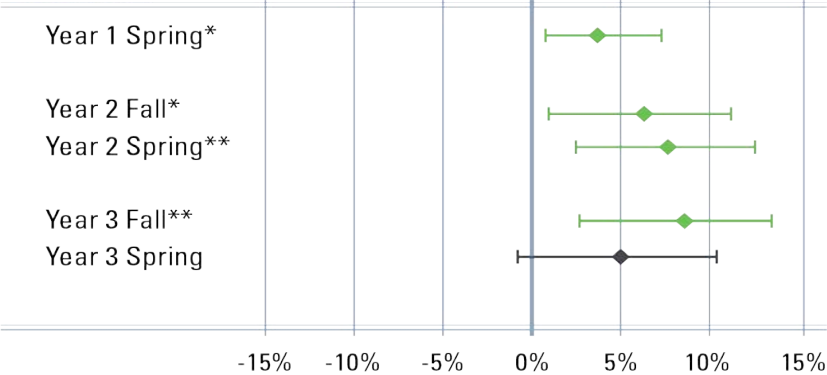
Figure 1. Summary of estimated Green Dot effects on proportion of students staying in same school, by cohort and semester (matched samples). Reported point estimates (diamonds) and approximate 95% confidence intervals (horizontal bars) are based on the adjusted regression probability estimates. *p-value < 0.05; ** p-value < 0.01.

Overall, the results suggest that GDL did not have a statistically significant effect on school persistence for the first cohort but did have a positive effect for the subsequent cohort. For example, by the end of the spring semester of the second year, 72% of the Cohort 1 students in both the control and GDL groups were still at the same school. For Cohort 2, 71% of the control students were still at the same school and 79% of the GDL students were still at GDL. The persistence trend for Cohort 1 and Cohort 2 is displayed in Figure 2. By the end of high school (fourth year for Cohort 1), 49% of GDL and 49% of the control students were still at their respective schools. Persistence rates for Cohort 2, at the end of year three, were

slightly higher for GDL students (65%) than the control students (60%) but were not found to be statistically significant.
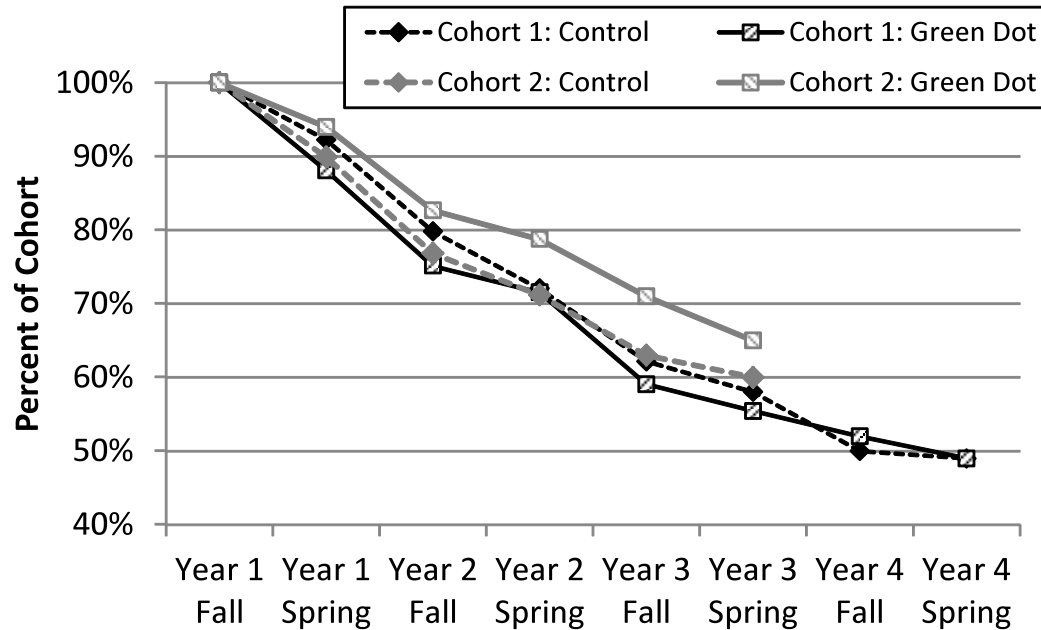
Figure 2. Percentage of students staying in the same school, by cohort and semester (matched sample).

School Attendance

To examine the degree to which students attend school when enrolled, we looked at student school attendance rates at four different points: end of year 1, end of year 2, end of year 3, and end of year 4 (Cohort 1 only). The analysis compared GDL students who were enrolled in all semesters up to and including the end-time point with the matched control students who were enrolled in all semesters up to and including the end-time point. For instance, we matched 121 Cohort 1 GDL students who were present during the end of fall and end of spring for years 1 and 2, to 121 Cohort 1 control students who were also present in the end of fall and end of spring for years 1 and 2. This comparison allowed us to examine attendance rates for students who were enrolled for the same number of semesters during high school and had similar 8th grade characteristics.

Results from the school attendance analysis are presented in Table 6 by cohort and semester for the matched samples. The table columns are set up in the same way as the columns in Table 5. The number of students in the matched control and GDL groups should be the same for a given cohort and year; however, missing data among the control group

resulted in some minor reductions in the number of control students in the matched samples. Differences in the sample size were not large enough to warrant any concern, however.

Table 6

Estimated Effect of Green Dot Locke on School Attendance Rates (Matched Sample)

Year	Control Group		Green Dot Group		Raw Difference		Adjusted Difference*	
	N	Mean	N	Mean	Estimate	(p-value)	Estimate	(p-value)
Cohort 1								
Year 1	165	0.93	165	0.93	0.00	(0.946)	0.00	(0.992)
Year 2	121	0.94	121	0.93	-0.01	(0.249)	-0.01	(0.432)
Year 3	93	0.93	94	0.95	0.02	(0.104)	0.02	(0.043)
Year 4	83	0.91	83	0.94	0.03	(0.000)	0.03	(0.036)
Cohort 2								
Year 1	489	0.92	489	0.92	0.00	(0.834)	0.00	(0.900)
Year 2	386	0.93	393	0.93	0.00	(0.532)	0.00	(0.542)
Year 3	311	0.93	311	0.94	0.01	(0.458)	0.00	(0.483)

Note. Results are for students in the matched sample for a given cohort and year. * The adjusted difference controls for a student's 8th grade attendance rate and ELA CST scale score.

Overall, the mean student attendance rates were fairly stable across cohorts and years— on average, students attended about 91% to 95% of the days enrolled. For both cohorts, attendance rates in years 1 and 2 did not differ between the GDL students and control students. The results for Cohort 1, however, suggest that GDL might have had a small positive impact on attendance in years 3 and 4. In the cohort's fourth year (12th grade for most students), the average attendance rate for GDL students was three percentage points higher than for the control students and was statistically significant at the 95th percentile level. The attendance rate for Cohort 2 in Year 3 showed no difference between GDL and their matched counterparts. The adjusted effect estimates are summarized in Figure 3 with their approximate 95% confidence intervals.

School Attendance
Estimated Green Dot Effect on Attendance Rate
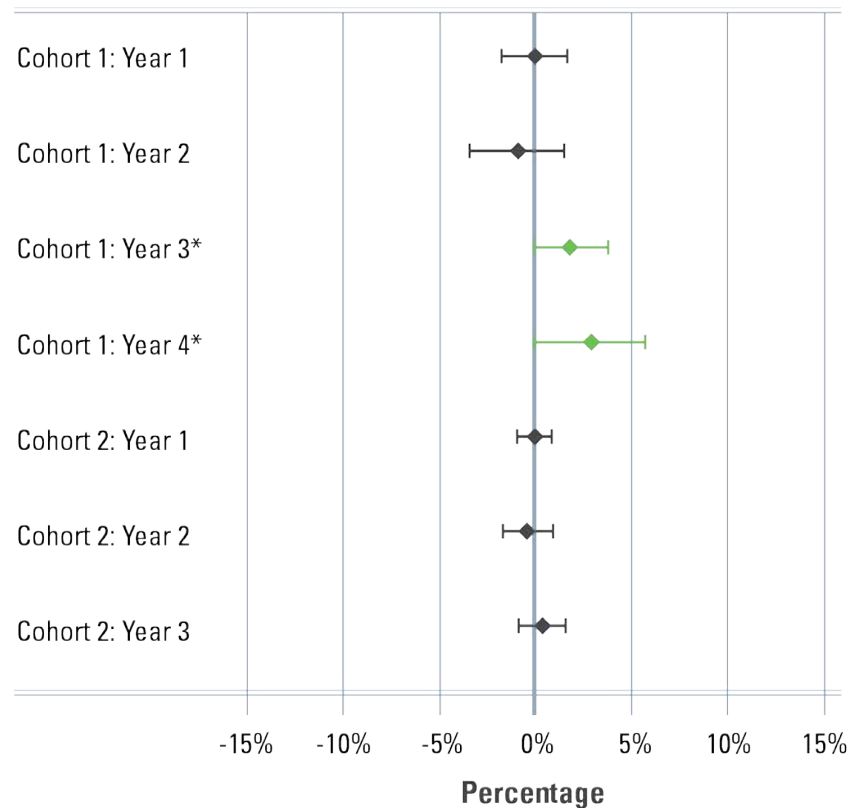
Figure 3. Summary of estimated Green Dot effects on school rates of attendance, by cohort and year (matched samples). Reported point estimates (diamonds) and approximate 95% confidence intervals (horizontal bars) are based on the adjusted regression effect estimates.*p-value < 0.05; ** p-value < 0.01.

Course-taking and Completion

We relied on course-taking data from LAUSD and Green Dot to examine whether GDL had improved students' progression toward college eligibility. We focused on whether students had taken and passed some of the key courses within the English, math, science, and social science subject areas[4]. The following guidelines and definitions were used in our analysis:

- For two semester courses (e.g., English 9A and English 9B) we defined course-taking as having been enrolled in both semesters. We defined passing as completing

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[4] For freshmen admission to UC and CSU system, students are required to have four years of English, three years of math, two years of social science, two years of science, one year of visual and performing arts, and two years of foreign language. Please refer to http://www.cde.ca.gov/ci/gs/hs/hsgrtable.asp for more details.

both semesters with a C or better, which is the definition used for UC/CSU A-G eligibility.

- Both course-taking and passing were based on a cumulative definition, which meant students got credit for taking/passing a course in a given year if they took/passed the course during that year or in a previous year.

- Additionally, given that 8th grade course information was not available, if a student took a higher level course in 9th grade, we assumed the student had taken and passed the lower level course in 8th grade. For instance, if a student took geometry in 9th grade, we coded the student as having taken both geometry and Algebra 1 by the end of 9th grade.

One should note, however, that this analysis did not include courses taken/passed during intersession or summer school because this information was not available from LAUSD. As a result, it is likely that our numbers underestimate the true course-taking and pass rates.

As with the analysis for school attendance, the course-taking analysis compared GDL students who were enrolled in all semesters up to and including the end-time point to the matched control students who were enrolled in all semesters up to and including the end-time point. This comparison allowed us to examine course-taking for students who were enrolled for the same number of semesters during high school and had similar 8th grade characteristics.

The results from the course-taking analysis are presented in Tables 7 and 8, by year and by course for the matched samples for Cohorts 1 and 2 students. For a given year, we only reported the courses a student should take (or have taken) by the end of the year to be on track to meet the UC/CSU A-G requirements. The table columns are set up in the same way as the columns in the previous tables. The number of students in the matched control and GDL groups should be the same for a given cohort, year, and test. Yet, some missing data caused unexpected differences in the number of students within a few comparisons. For example, for Cohort 1 in year 1, we only had course data for 124 of the 130 matched GDL students, while we had data for all 130 control students. The differences in sample size were small and were not likely to significantly alter the findings. In all cases, however, one should give more credence to the adjusted estimates because they adjusted for any residual group differences in 8th grade CST performance.

Overall, the course-taking results indicated that course-taking and passing for the GDL students was on par or better than the control students' course-taking and passing, this was especially true for Cohort 2 students. For Cohort 1, GDL students were less likely to take English 9 and Algebra 1 compared to the control group but the overall percentage of students

who passed those courses did not differ significantly between the GDL and control groups. Furthermore, for years 2 and 3, a higher percentage of GDL students took and passed many of the key courses compared to the control students. For example, 41% of the GDL students in Cohort 1 took and passed geometry by the end of year 2 (10th grade) compared to 27% of the control students. We found similar statistically significant positive results for science. For Cohort 2, we found a statistically significant positive difference between GDL and control students starting in the first year (9th grade). For instance, the percentage of GDL students who passed Algebra 1 by the end of year 1 was 12 percentage points higher than the control group for Cohort 2 (46% vs. 34%) and 18 percentage points higher for Cohort 3 (49% vs. 30%).

Table 7

Estimated Effect of Green Dot Locke on Course-taking & Pass Rates (Matched Sample): Cohort 1

Course	Control Group		Green Dot Group		Raw Difference		Adjusted Difference*	
	N	Mean	N	Mean	Est.	(p-value)	Est.	(p-value)
Year 1								
English 9								
Took	130	0.59	124	0.43	-0.16	(0.009)	-0.17	(0.008)
Passed	130	0.33	124	0.37	0.04	(0.504)	0.04	(0.505)
Algebra 1								
Took	130	0.73	124	0.45	-0.28	(0.000)	-0.28	(0.000)
Passed	130	0.33	124	0.31	-0.02	(0.679)	-0.02	(0.688)
Year 2								
English 10								
Took	104	0.60	106	0.66	0.06	(0.338)	0.06	(0.370)
Passed	104	0.40	106	0.52	0.12	(0.096)	0.12	(0.096)
Geometry								
Took	104	0.63	106	0.79	0.16	(0.011)	0.15	(0.013)
Passed	104	0.27	106	0.41	0.14	(0.037)	0.14	(0.036)
Science								
Took	104	0.53	106	0.79	0.26	(0.000)	0.26	(0.000)
Passed	104	0.30	106	0.50	0.20	(0.003)	0.20	(0.003)
World History								
Took	104	0.58	106	0.54	-0.04	(0.570)	-0.04	(0.529)
Passed	104	0.38	106	0.33	-0.05	(0.413)	-0.05	(0.439)

	Control Group		Green Dot Group		Raw Difference		Adjusted Difference*	
Course	N	Mean	N	Mean	Est.	(p-value)	Est.	(p-value)
Year 3								
Algebra 2								
Took	94	0.73	94	0.94	0.20	(0.000)	0.20	(0.000)
Passed	94	0.36	94	0.72	0.36	(0.000)	0.36	(0.000)
2nd Science								
Took	94	0.61	94	0.74	0.14	(0.043)	0.14	(0.035)
Passed	94	0.22	94	0.47	0.24	(0.000)	0.24	(0.000)
US History								
Took	94	0.77	94	0.71	-0.05	(0.409)	-0.05	(0.475)
Passed	94	0.40	94	0.39	-0.01	(0.882)	-0.01	(0.884)
BY Year 4								
≥ 2 English Courses								
Took	83	0.52	83	0.87	0.35	(0.000)	0.35	(0.000)
Passed	83	0.34	83	0.73	0.40	(0.000)	0.40	(0.000)
≥ 2 Math Courses								
Took	83	0.76	83	0.82	0.06	(0.344)	0.07	(0.299)
Passed	83	0.37	83	0.54	0.17	(0.029)	0.17	(0.028)
≥ 2 Science Courses								
Took	83	0.69	83	0.78	0.10	(0.161)	0.10	(0.132)
Passed	83	0.25	83	0.53	0.28	(0.000)	0.28	(0.000)
≥2 Social Sci Courses								
Took	83	0.54	83	0.45	-0.10	(0.217)	-0.09	(0.255)
Passed	83	0.27	83	0.23	-0.04	(0.592)	-0.03	(0.630)
≥ 8 Key Courses								
Took	83	0.55	83	0.77	0.22	(0.003)	0.22	(0.002)
Passed	83	0.13	83	0.46	0.33	(0.000)	0.33	(0.000)

Note. Results are for students in the matched sample for a given cohort and year. Course-taking and pass rates are for the listed course or a higher-level course in a given year. The reported estimates are the calculated probabilities based on the coefficients generated from the logistic regression analysis. *The adjusted difference controls for a student's 8th grade ELA CST scale score.

Table 8

Estimated Effect of Green Dot Locke on Course-taking & Pass Rates (Matched Sample): Cohort 2

| | Control Group | | Green Dot Group | | Raw Difference | | Adjusted Difference* | |
Course	N	Mean	N	Mean	Est.	(p-value)	Est.	(p-value)
Cohort 2								
Year 1								
English 9								
Took	443	0.70	438	0.87	0.17	(0.000)	0.17	(0.000)
Passed	443	0.38	438	0.41	0.03	(0.336)	0.03	(0.404)
Algebra 1								
Took	443	0.77	438	0.87	0.09	(0.000)	0.09	(0.000)
Passed	443	0.34	438	0.46	0.12	(0.000)	0.11	(0.001)
Year 2								
English 10								
Took	393	0.79	393	0.71	-0.08	(0.008)	-0.08	(0.008)
Passed	393	0.39	393	0.40	0.02	(0.610)	0.02	(0.593)
Geometry								
Took	393	0.77	393	0.80	0.04	(0.193)	0.04	(0.182)
Passed	393	0.37	393	0.42	0.05	(0.145)	0.05	(0.110)
1 Science								
Took	393	0.82	393	1.00	0.18	(0.000)	0.18	(0.000)
Passed	393	0.42	393	0.74	0.32	(0.000)	0.32	(0.000)
World History								
Took	393	0.77	393	0.83	0.06	(0.032)	0.06	(0.032)
Passed	393	0.38	393	0.58	0.19	(0.000)	0.19	(0.000)
Year 3								
Algebra 2								
Took	311	0.61	311	0.82	0.21	(0.000)	0.21	(0.000)
Passed	311	0.28	311	0.46	0.18	(0.000)	0.18	(0.000)
2nd Science								
Took	311	0.72	311	0.95	0.23	(0.000)	0.23	(0.000)
Passed	311	0.31	311	0.63	0.33	(0.000)	0.31	(0.000)
US History								
Took	311	0.63	311	0.72	0.09	(0.017)	0.10	(0.009)
Passed	311	0.37	311	0.48	0.11	(0.006)	0.11	(0.005)

Course	Control Group N	Control Group Mean	Green Dot Group N	Green Dot Group Mean	Raw Difference Est.	Raw Difference (p-value)	Adjusted Difference* Est.	Adjusted Difference* (p-value)
Cohort 2								
By Year 3								
≥ 2 Eng. Courses								
Took	311	0.58	311	0.80	0.22	(0.000)	0.22	(0.000)
Passed	311	0.27	311	0.43	0.17	(0.000)	0.16	(0.000)
≥ 2 Math Courses								
Took	311	0.79	311	0.88	0.09	(0.002)	0.09	(0.003)
Passed	311	0.33	311	0.50	0.18	(0.000)	0.17	(0.000)
≥ 2 Sci. Courses								
Took	311	0.72	311	0.95	0.23	(0.000)	0.23	(0.000)
Passed	311	0.31	311	0.63	0.33	(0.000)	0.31	(0.000)
≥ 2 Social Sci Courses								
Took	311	0.59	311	0.67	0.07	(0.056)	0.08	(0.033)
Passed	311	0.25	311	0.37	0.12	(0.001)	0.12	(0.001)
≥ 8 Key Courses								
Took	311	0.52	311	0.80	0.27	(0.000)	0.27	(0.000)
Passed	311	0.14	311	0.39	0.25	(0.000)	0.24	(0.000)

Note. Results are for students in the matched sample for a given cohort and year. Course-taking and pass rates are for the listed course or a higher-level course in a given year. The reported estimates are the calculated probabilities based on the coefficients generated from the logistic regression analysis. *The adjusted difference controls for a student's 8th grade ELA CST scale score.

For each cohort, we also added and analyzed a set of new course indicators specifically on whether the students had taken and passed two or more key courses we identified in each of the four subjects and whether they had taken and passed eight or more of the key courses across the four subjects by the end of 2010-11. We found similar results as we did with individual courses; course-taking and passing for the GDL students was on par or better than the control students' course-taking and passing, and this was especially true for Cohort 2 students. For Cohort 1, GDL students were statistically more likely to have taken two or more key English courses and to have taken eight or more key courses we identified by the end of their senior year compared to the control group students. Cohort 1 GDL students were statistically more likely to have passed two or more key English, math, and science courses and to have passed eight or more key courses we identified by the end of their senior year compared to the control group students. The positive effect pattern was stronger and

consistent for Cohort 2 GDL students. For Cohort 2, by the end of the junior year, we found a statistically significant positive difference between GDL and control students in both taking and passing two or more key courses by subject and a combined eight or more key courses. For instance, the adjusted percentage of GDL students who passed eight or more key courses by the end of year 3 was 24 percentage points higher than the control group for Cohort 2 (39% vs. 14%). The adjusted effect estimates for course-taking rates and pass rates are also presented in Figures 4 and 5 for Cohort 1 and in Figures 6 and 7 for Cohort 2, respectively.

Cohort 1
Estimated Green Dot Effect on Course Taking Rates
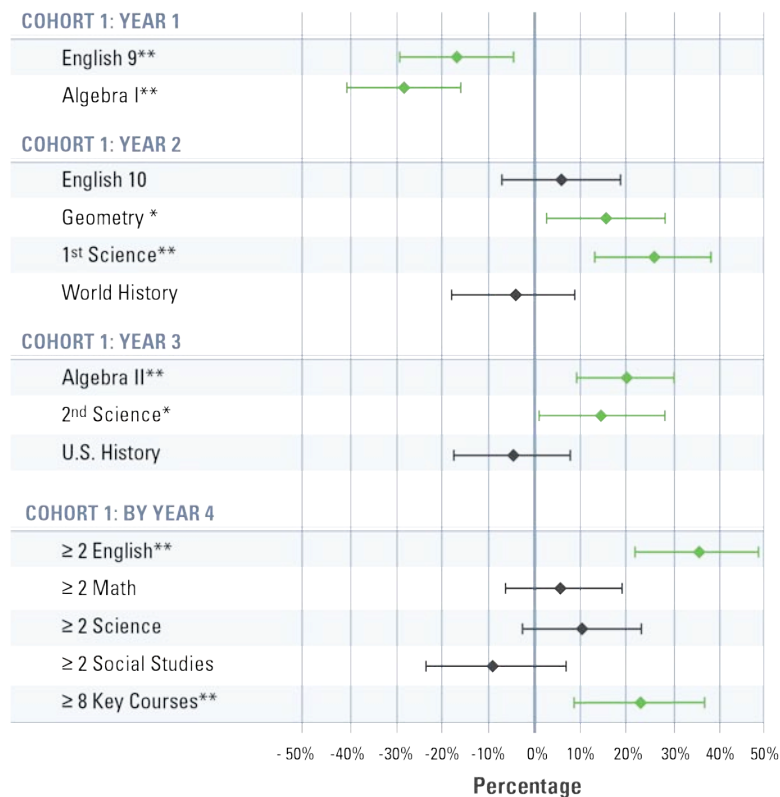
Figure 4. Summary of estimated Green Dot effects on proportion of Cohort 1 students taking a given course, by year (matched samples). Reported point estimates (diamonds) and approximate 95% confidence intervals (horizontal bars) are based on the adjusted regression probability estimates.*p-value < 0.05; ** *p*-value < 0.01.

Cohort 1
Estimated Green Dot Effect on Course Pass Rates
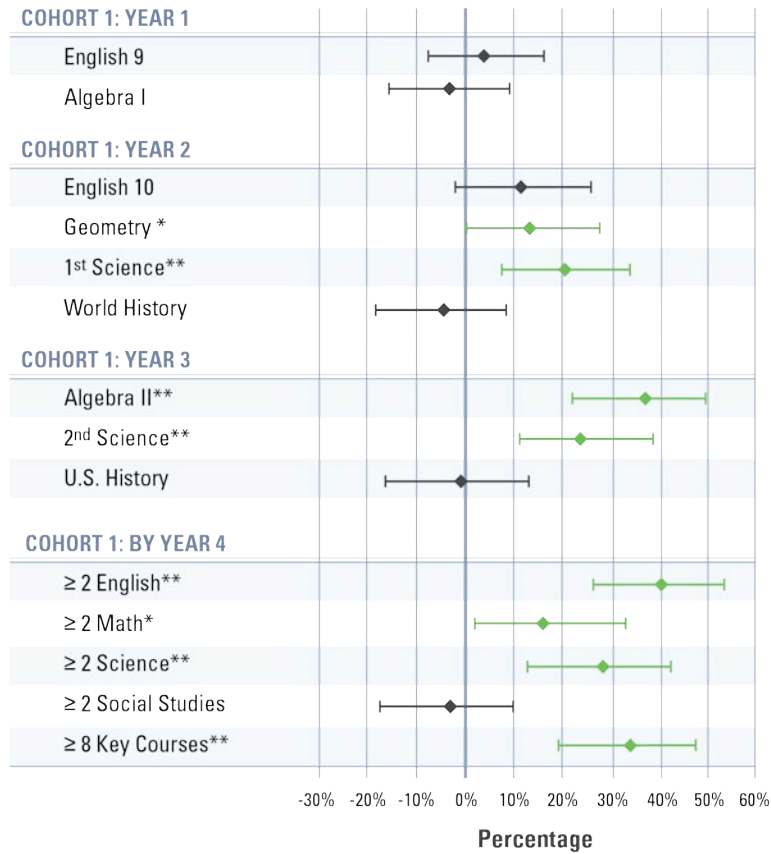
Figure 5. Summary of estimated Green Dot effects on proportion of Cohort 1 students passing a given course, by year (matched samples).Reported point estimates (diamonds) and approximate 95% confidence intervals (horizontal bars) are based on the adjusted regression probability estimates.*p-value < 0.05; ** p-value < 0.01.

Cohort 2
Estimated Green Dot Effect on Course Taking Rates
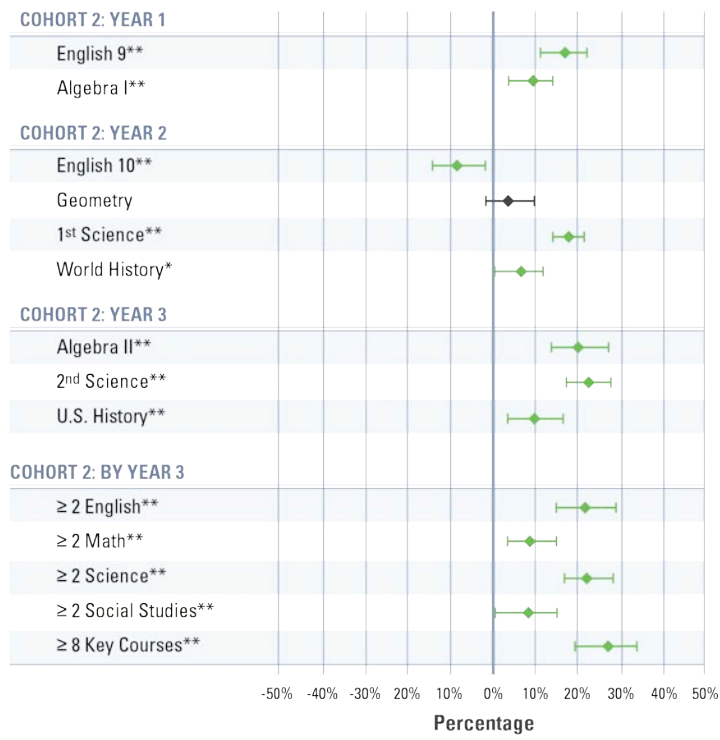
Figure 6. Summary of estimated Green Dot effects on proportion of Cohort 2 students taking a given course, by year (matched samples). Reported point estimates (diamonds) and approximate 95% confidence intervals (horizontal bars) are based on the adjusted regression probability estimates.*p-value < 0.05; ** *p*-value < 0.01.

Cohort 2
Estimated Green Dot Effect on Course Pass Rates
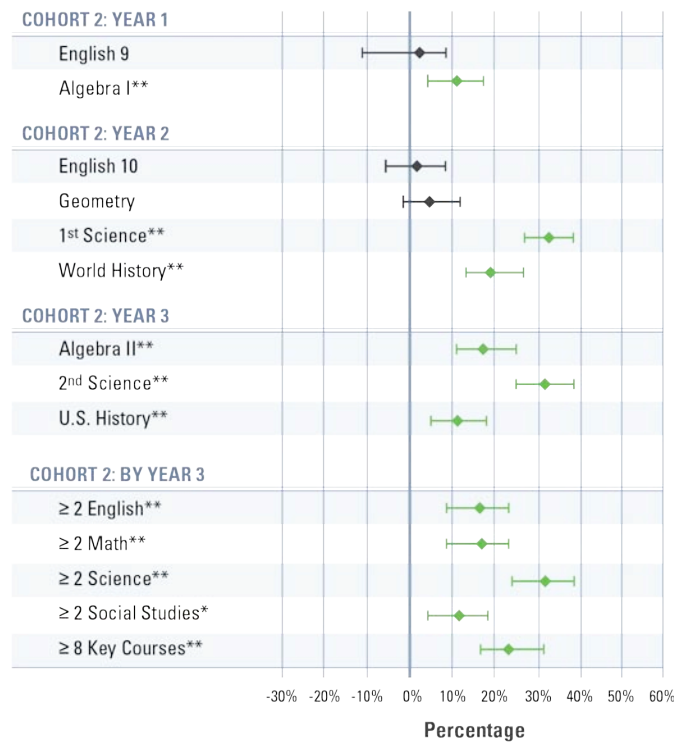
Figure 7. Summary of estimated Green Dot effects on proportion of Cohort 2 students passing a given course, by year (matched samples). Reported point estimates (diamonds) and approximate 95% confidence intervals (horizontal bars) are based on the adjusted regression probability estimates. * *p*-value < 0.05; ** *p*-value < 0.01.

Student Achievement

Course-taking and pass rates provide a measure of student achievement. Standardized tests provide another gauge for evaluating how much students learn while they are in school. To examine whether GDL improved student learning, we relied on student performance data on the ELA and Math CST and CAHSEE.

California Standards Test

We focused on CST scale scores instead of performance levels because they were more likely to detect treatment effects with the wider range of scale scores and provide a more sensitive measure of student achievement. As with the analysis for school attendance, the CST analysis compared GDL students who were enrolled in all semesters up to and including the end-time point to the matched control students who were enrolled in all semesters up to

and including the end-time point. We also conducted separate analyses for each CST math test (e.g., Algebra 1 and geometry). This comparison allowed us to examine CST performance for students who were enrolled for the same number of semesters during high school, took the same test, and had similar 8th grade characteristics.

Results from the CST analysis are presented in Table 9 by cohort, year, and test for the matched samples. For the math tests, only those tests that represented the two main math courses in each grade are reported.[5] The table columns are set up in the same way as the columns in the previous tables. The number of students in the matched control and GDL groups should be the same for a given cohort, year, and test. However, math test-taking differences between GDL and control students caused unexpected differences in the number of students within a comparison. For example, for Cohort 2 in year 1,380 control students took Algebra 1 while 415 GDL students took Algebra 1—even though the two matched groups had an equal number of students who took Algebra 1 in middle school. In most comparisons, however, the differences were small and not likely to significantly alter the findings. It is important to note that in all cases, one should give more credence to the adjusted estimates because they adjusted for any residual group differences in 8th grade CST performance.

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[5] Across the cohorts and years, the two main math courses for a given year captures between 88% and 100% of the matched GDL students. In four of the six cohort-year combinations, the two main math courses include at least 95% of the matched GDL students.

Table 9

Estimated Effect of Green Dot Locke on CST Scale Scores (Matched Sample)

CST	Control Group		Green Dot Group		Raw Difference		Adjusted Difference*	
	N	Mean	N	Mean	Est.	(p-value)	Est.	(p-value)
Cohort 1								
Year 1								
ELA	165	305.50	165	314.74	9.24	(0.060)	9.22	(0.003)
Algebra 1	138	264.12	140	278.63	14.51	(0.005)	14.70	(0.002)
Geometry	23	273.83	24	307.17	33.34	(0.020)	27.11	(0.005)
Year 2								
ELA	121	300.01	121	302.26	2.26	(0.709)	3.28	(0.438)
Geometry	67	244.31	84	256.56	12.25	(0.011)	13.07	(0.006)
Algebra 2	35	244.74	31	293.32	48.58	(0.000)	33.54	(0.001)
Year 3								
ELA	94	296.15	94	294.80	-1.35	(0.856)	-4.38	(0.440)
Algebra 2	45	243.64	61	246.20	2.55	(0.626)	3.66	(0.484)
Sum. Math	24	243.83	26	279.54	35.71	(0.036)	29.84	(0.041)
Cohort 2								
Year 1								
ELA	489	301.57	489	304.60	3.02	(0.281)	2.93	(0.104)
Algebra 1	380	266.11	415	266.71	0.60	(0.809)	0.77	(0.735)
Geometry	94	270.83	74	293.04	22.21	(0.000)	16.05	(0.001)
Year 2								
ELA	393	295.14	393	298.85	3.71	(0.252)	3.99	(0.070)
Geometry	225	251.93	221	255.33	3.40	(0.232)	3.30	(0.222)
Algebra 2	123	256.79	124	268.57	11.78	(0.039)	11.37	(0.017)
Year 3								
ELA	311	298.48	311	302.92	4.45	(0.275)	3.04	(0.396)
Algebra 2	125	242.90	191	253.91	11.01	(0.006)	12.44	(0.001)
Sum. Math	71	247.65	80	271.66	24.02	(0.001)	22.24	(0.001)

Note. Results are for students in the matched sample for a given cohort and year. *The adjusted difference controls for a student's 8th grade CST scale score for the respective subject test.

Overall, the CST results indicated that the GDL students performed, on average, as well or better than the control students. However, effects of GDL were not consistent across cohorts, years, or tests. On the ELA CST, GDL students had statistically significant higher

scale scores in year 1 for Cohort 1 but did not have significantly different scores in any year for Cohort 2. The adjusted effect estimates for the ELA CST are summarized in Figure 8. More positive effects were found for the Math CST. GDL students who took the Algebra 1 CST in Cohort 1 also experienced statistically significant positive effects but their Cohort 2 counterparts did not. GDL students in Cohorts 1 and 2 who took the geometry CST in year 1 experienced statistically significant positive effects. In year 2, Cohort 1 GDL students outperformed the control students on the geometry and Algebra 2 CST but the Cohort 2 GDL students only outperformed the control students on the Algebra 2 CST. In year 3, both Cohort 1 and 2 GDL students outperformed the control students in summative math, but Cohort 1 students did not outperform their matched counterparts in Algebra 2. The inconsistency in results makes it difficult to draw strong conclusions from the CST data—yet the general trend is a positive one for GDL students. The adjusted effect estimates for the math CST are summarized in Figure 9.
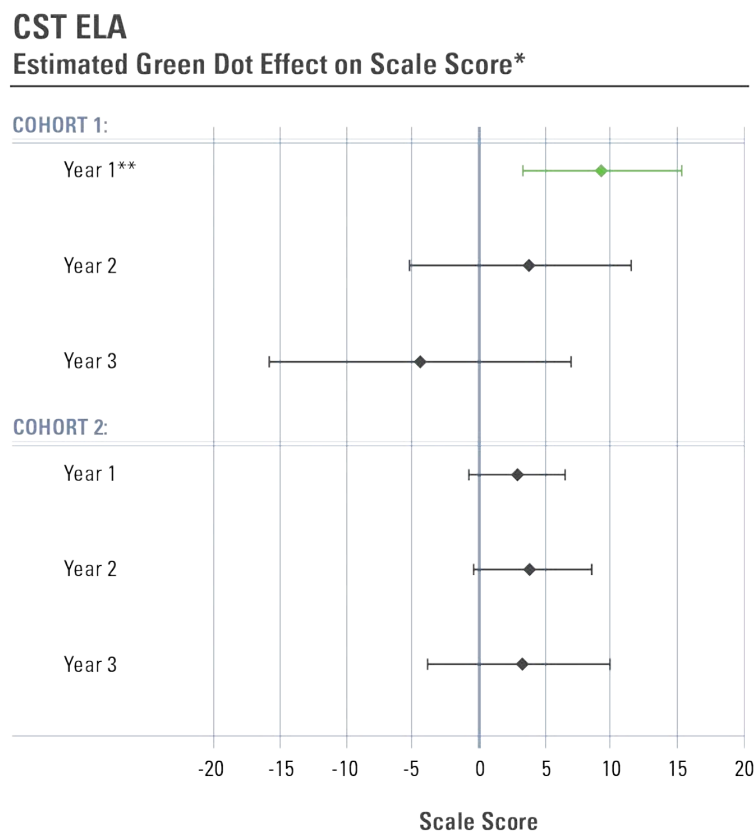
Figure 8. Summary of estimated Green Dot effects on ELA CST scale scores, by cohort and year (matched samples). Reported point estimates (diamonds) and approximate 95% confidence intervals (horizontal bars) are based on the regression adjusted effect estimates. *p-value < 0.05; ** p-value < 0.01.

CST Math
Estimated Green Dot Effect on Scale Score
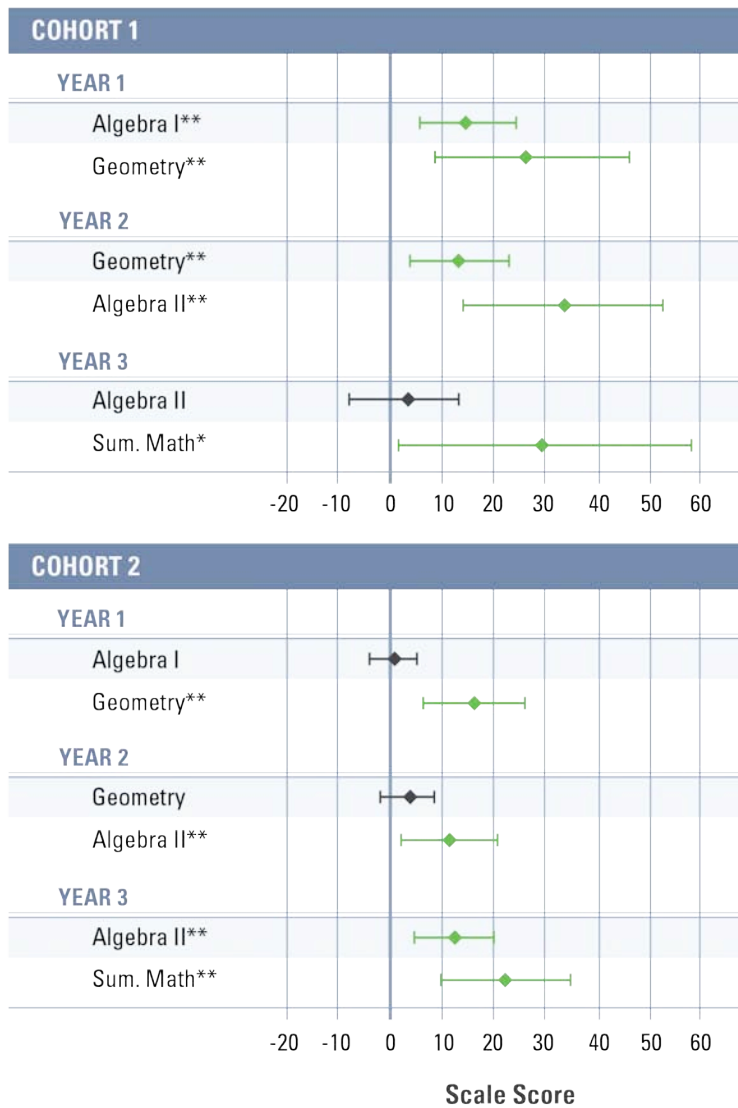
Figure 9. Summary of estimated Green Dot effects on CST Math scale scores, by cohort, year, and math test (matched samples). Reported point estimates (diamonds) and approximate 95% confidence intervals (horizontal bars) are based on the regression adjusted effect estimates.*p-value < 0.05; ** p-value < 0.01.

California High School Exit Exam

The CAHSEE is arguably the most important benchmark used to measure California high school students' learning progress. In fact, students cannot graduate without passing

both the ELA and math sections of this test[6]. The CAHSEE also provides a more comparable measure of student learning because all students take the same test for the first time in 10th grade (as opposed to the CST math tests, which are tied to students' specific courses). If students do not pass either the ELA or math portion of the CAHSEE in 10th grade, they can retake the test multiple times in 11th and 12th grade. To examine the effect of the GDL transformation on CAHSEE performance, we focused on student scale scores for the first attempt of the ELA and math sections, as well as the percentages of students who passed each section on the first attempt (10th grade), passed on any attempt through the 2010-11 school year, or passed after failing in their first attempt.

As with the analysis of CST performance, we compared GDL students who were enrolled in all semesters up to and including the end-time point (either year 3 or year 4) to the matched control students who were enrolled in all semesters up to and including the end-time point. This comparison allowed us to examine CAHSEE performance for students who were enrolled for the same number of semesters during high school and had similar 8th grade characteristics. The only difference in our analyses for Cohort 1 and Cohort 2 is that for the latter group, we do not have data for their fourth year (2011-12).

Results from the CAHSEE analysis are presented in Table 10 by cohort, year, and outcome measure for the matched samples. The table columns are set up in the same way as the columns in the previous tables for CST results. The number of students in the matched control and GDL groups should be the same for a given cohort, year, and outcome. However, test-taking differences between GDL and control students caused unexpected differences in the number of students within a comparison. For example, for Cohort 1 in year 2, 121 GDL students took the ELA test but only 109 control students took the ELA test. In most comparisons, the differences were small and were not likely to significantly alter the findings.

While the raw differences provide an accurate description of observed differences between the control and GDL groups, one should give more credence to the adjusted estimates because they adjust for any residual group differences in 8th grade CST performance. Though the propensity score matching method reduces differences in covariates, such as the 8th grade CST, it does not necessarily eliminate all differences. Hence, the adjusted differences arguably provide a more accurate picture of differences between the groups in CAHSEE passage rates.

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[6] Per CDE website, beginning in 2009–10, *EC* Section 60852.3 provides an exemption from meeting the CAHSEE requirement as a condition of receiving a diploma of graduation for eligible students with disabilities who have an individualized education program (IEP) or a Section 504 plan.

Like the CST results, the CAHSEE results indicated that GDL students generally performed the same or better than control students. For Cohort 1, GDL did not significantly affect how well students performed on their first attempt at the CAHSEE ELA and math tests, as reported in Table 10. For Cohort 2, GDL did significantly affect how well students performed on their first attempt at CAHSEE ELA. For students with average 8th grade CST performance (adjusted differences), Cohort 2 GDL students scored approximately four scale score points higher on the ELA test and seven scale score points higher on the math test, on average, than the control students.

Table 10

Estimated Effect of Green Dot Locke on CAHSEE Performance by Cohort: 1st Attempt in 10th Grade (Matched Sample)

CAHSEE	Control group		GDL group		Raw difference		Adjusted difference*	
	N	Mean	N	Mean	Est.	(p-value)	Est.	(p-value)
Cohort 1, year 2 (1st attempt)								
ELA Score	109	354.94	121	350.93	-4.00	(0.311)	-1.94	(0.471)
Math Score	107	357.56	121	356.70	-0.86	(0.835)	1.06	(0.751)
% Passed ELA	109	0.62	121	0.52	-0.10	(0.116)	-0.08	(0.160)
% Passed Math	107	0.59	121	0.55	-0.04	(0.512)	-0.02	(0.695)
Cohort 2, year 2 (1st attempt)								
ELA Score	344	353.74	381	356.09	2.36	(0.301)	3.79	(0.014)
Math Score	346	354.74	373	361.02	6.27	(0.007)	6.99	(0.000)
% Passed ELA	344	0.54	381	0.58	0.04	(0.253)	0.06	(0.035)
% Passed Math	346	0.55	380	0.60	0.05	(0.194)	0.06	(0.063)

Note. Results are for students in the matched sample for a given cohort and year. The reported estimates for % passing ELA and % passing math are the calculated probabilities based on the coefficients generated from the logistic regression analysis. *The adjusted difference controls for a student's 8th grade CST scale score for the respective subject test.

Table 11 reports the passing rates for students who took CAHSEE after failing the first time in 10th grade, and for students who took CAHSEE one or more times by 11th and 12th grades (Cohort 1 only) and by 11th grade (Cohort 2 only). By 11th grade, comparing the Cohort 1 students and their matched control students who retook the CAHSEE after failing their first attempt in 10th grade, GDL re-takers had a 17 percentage-point higher passing rates than the control students in the raw percentage in both ELA and math; the difference was statistically significant for passing the math CAHSEE. By 12th grade, no statistical

difference was found in the passing rates between Cohort 1 GDL and control group re-takers. Ignoring the number of attempts students made in taking and passing CAHSEE, by the end of 11th grade, GDL students were more likely to pass CAHSEE math than control students and the difference was statistically significant. The significant effect went away by the end of 12th grade.

The positive and statistically significant effect in CAHSEE math, regardless of how many attempts the students made by the end of 11th grade, was also found for Cohort 2 students. The effect was also significant in CAHSEE ELA. GDL's retakers were 13 and 17 percentage points more likely to pass ELA and math CAHSEE than control group retakers, respectively. For ELA, the GDL group had the advantages of 6 percentage points (adjusted) in passing rates; for Math, the GDL group had higher passing rates by 9 percentage points (adjusted) than the control group.

Table 11

Estimated Effect of Green Dot Locke on CAHSEE Performance (Matched Sample): All Attempts

CAHSEE	Control Group N	Control Group Mean	GDL Group N	GDL Group Mean	Raw Difference Est.	Raw Difference (p-value)	Adjusted Difference* Est.	Adjusted Difference* (p-value)
Cohort 1: year 3 (Passed in ≥ 2 attempts)								
% Passed ELA	41	0.24	58	0.41	0.17	(0.081)	0.16	(0.097)
% Passed Math	44	0.32	55	0.49	0.17	(0.085)	0.20	(0.047)
Cohort 1: year 3 (Any attempt)								
% Passed ELA	93	0.73	94	0.78	0.05	(0.474)	0.03	(0.594)
% Passed Math	93	0.70	94	0.84	0.14	(0.021)	0.14	(0.018)
Cohort 1: year 4 (Passed in ≥ 2 attempts)								
% Passed ELA	36	0.78	36	0.69	-0.08	(0.430)	-0.15	(0.165)
% Passed Math	33	0.79	35	0.71	-0.07	(0.491)	-0.07	(0.513)
Cohort 1: year 4 (Any attempt)								
% Passed ELA	83	0.90	83	0.87	-0.04	(0.468)	-0.04	(0.352)
% Passed Math	83	0.92	83	0.89	-0.02	(0.461)	-0.02	(0.442)
Cohort 2: year 3 (Passed in ≥ 2 attempts)								
% Passed ELA	135	0.38	117	0.51	0.14	(0.031)	0.13	(0.043)
% Passed Math	137	0.39	105	0.55	0.17	(0.010)	0.17	(0.017)
Cohort 2: year 3 (Any attempt)								
% Passed ELA	307	0.73	308	0.81	0.09	(0.009)	0.06	(0.008)
% Passed Math	307	0.73	308	0.85	0.12	(<0.001)	0.09	(<0.001)

Note. Results are for students in the matched sample for a given cohort and year that passed the CAHSEE in two or more attempts. The sample size N is the number of students in each group that failed the first attempt and retook the exam. The reported estimates are the calculated probabilities based on the coefficients generated from the logistic regression analysis. *The adjusted difference controls for a student's 8th grade CST scale score for the respective subject test.

CAHSEE Passing Rates
Estimated Green Dot Effect on Pass Rate
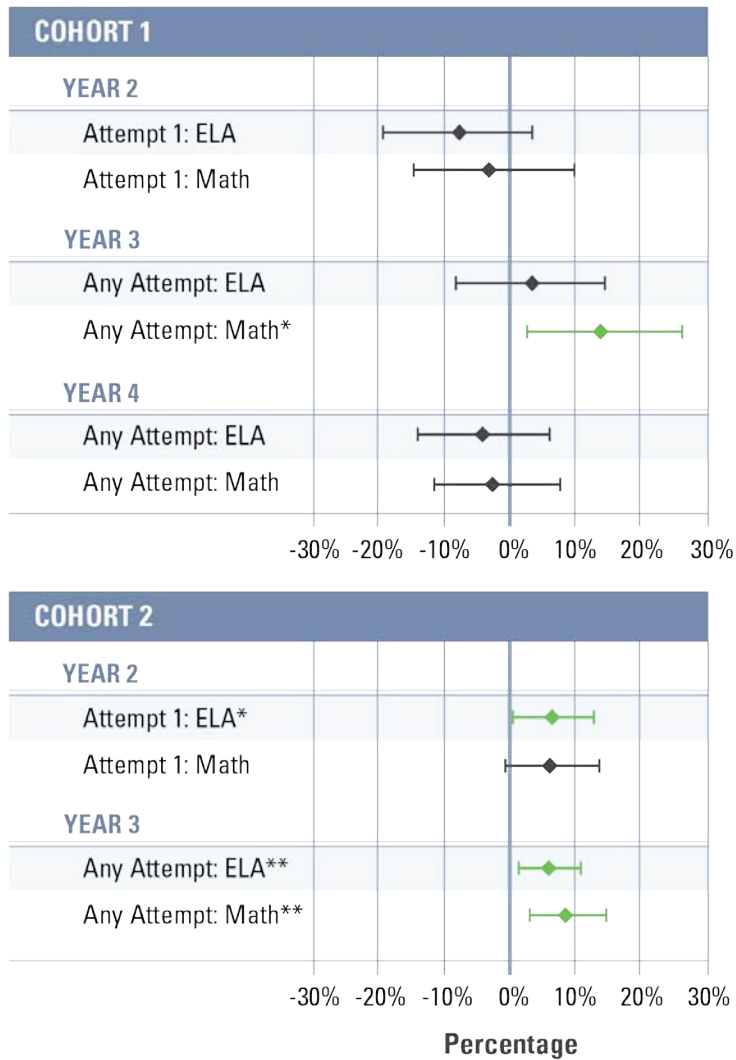
Figure 10. Summary of estimated Green Dot effects on CAHSEE performance, by cohort and test (matched samples). Reported point estimates (diamonds) and approximate 95% confidence intervals (horizontal bars) are based on the adjusted regression probability estimates. *p-value < 0.05; ** p-value < 0.01.

End-of-High School Measures

To examine the effect of the GDL transformation on student college readiness and high school completion, CRESST analyzed A-G completion rates at the time of graduation, as well as graduation data itself. As previously mentioned, students who want to attend any

school in the University of California (UC) or the California State University (CSU) systems as a freshman must complete a series of courses in high school classified under A-G subjects.

Similar to the analysis of persistence for Cohort 1, our analysis of graduation and A-G compared GDL students who were enrolled in all semesters up to and including the end-time point (year 4) to the matched control students who were enrolled in all semesters up to and including the end-time point. At the time this report was produced, data was available for students who entered 9th grade in 2007-08, GDL's Cohort 1.

Further, even as GDL Cohort 2 shows more statistically significant, positive effects than does Cohort 1, Cohort 1 graduation and college readiness rates, as judged by A-G completion, are impressive. For students who remained at their schools for four years, the GDL graduation rate was 24 percentage points higher than that for the comparison group. Further, the college readiness rate was 34 percentage points higher for GDL graduates than for comparison group graduates (Cohort 2 students were in 11th grade and had not yet progressed to graduation at the time of the study).

Table 12

Estimated Effect of Green Dot Locke on A-G Completion and Graduation (Year 4 Matched Sample)

	Control Group		Green Dot Group		Raw Difference		Adjusted Difference*	
Outcome	N	Mean	N	Mean	Estimate	(p-value)	Estimate	(p-value)
Graduation	83	0.55	83	0.80	0.24	(0.001)	0.24	(0.001)
Graduation & A-G Completion	83	0.13	83	0.48	0.35	(0.000)	0.34	(0.000)

Note. Results are for students in the matched sample for Cohort 1 only. The reported estimates are the calculated probabilities based on the coefficients generated from the logistic regression analysis. *The adjusted difference controls for a student's 8th grade CST ELA scale score.

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Graduation & A-G Completion
Estimated Green Dot Effect on End-of-High School Outcomes Rates
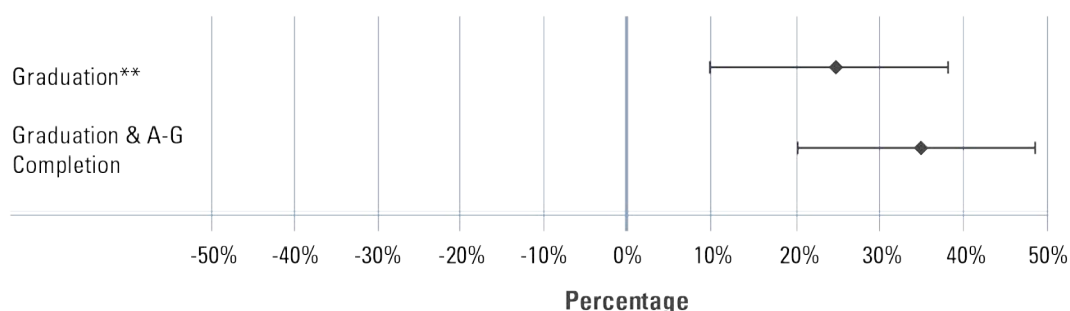
Figure 11. Summary of estimated Green Dot effects on End-of-High School Outcome Measures for Cohort 1 (matched samples). Reported point estimates (diamonds) and approximate 95% confidence intervals (horizontal bars) are based on the adjusted regression probability estimates. *p*-value < 0.05; ** *p*-value < 0.01.

In summary, we found that Cohorts 1 and 2 GDL students were very similar to Locke's demographic profile prior to the GDL transformation, as well as to control students who attended the three control high schools in LAUSD. Both GDL freshman cohorts were almost entirely Latino or African American; they were usually participants of the National School Lunch Program (NSLP); and a large proportion of these students were classified as English learners (ELs). 8th grade California Standards Test (CST) scores for entering GDL students clearly demonstrate the academic challenge of the transformation. The majority of incoming GDL freshman in Cohorts 1 and 2 scored below basic or far below basic on the mathematics and the ELA sections of the CST. Furthermore, GDL students performed similarly to students who attended the three control high schools.

To the extent that the student characteristics and performance measures used for matching captured the important differences between GDL and non-GDL students, one can interpret the effect estimates presented in the matched analysis section as the causal effect of the Green Dot transformation. With that said, all the outcomes examined show very positive effects, especially for Cohort 2 students. Persistence rates, course-taking and passing rates, and achievement scores suggest that 9th graders who entered GDL often performed better than they would have if they attended a comparable LAUSD high school. Positive GDL transformation effects were generally more prevalent for the second cohort of students than for the first cohort. For example, compared to the matched non-GDL students, GDL students in Cohort 2 were more likely to stay in the same school over time, take and pass some of the

key 9th, 10th, and 11th grade courses, take and pass eight or more key courses, score higher on the CAHSEE on their first attempt, and pass ELA CAHSEE by the end of 11th grade.

Conclusion

Study Limitations

Like all studies, our analysis was constrained by available data and the conditions under which the GDL transformation was implemented. These overall constraints pose limitations in regards to the depth with which we could explore trends in academic outcomes and the extent to which one should interpret the effect estimates as causal. Before addressing caveats to the causal interpretations of the results, we would like to discuss more general limitations of the study's design.

Our analyses required the processing of student-level data from both GDL and LAUSD. In some cases, the availability of data from one or both sources did not allow us to address important questions. Most importantly, we did not have data on students who left GDL and LAUSD during the time period examined for this report. As a result, we cannot examine outcomes for these students. Similarly, we did not have pre-high school data for students who entered GDL from outside the three local districts from which we received LAUSD data. Thus, our analyses examined students from specific local districts and who attended GDL at defined points in time; this did not capture all students exposed to the GDL transformation. Additionally, we only had data that covered the first four years of the GDL transformation with Cohort 1 starting with 261 GDL students; hence, we would be more confident in our graduation outcome results if we could extend the graduation outcome analysis to Cohort 2 students.

One of the most challenging outcomes to examine, from a data availability perspective, was course-taking and completion. The course-taking data were not aligned across GDL and LAUSD data sources (particularly in terms of course names/codes). For example, for effect estimates, we did not report English course-taking and passing effects in 11th grade because we could not rectify database differences in the 11th grade English core courses. Additionally, we did not have access to summer school or intersession course-taking for LAUSD students, so our results are restricted to courses taken and passed during the fall and spring semesters. Given GDL's heavy use of intercession courses for struggling students, this omission most likely underestimates the reported course-taking and pass rate effects for the GDL transformation.

In terms of assessing whether observed student outcomes were causally affected by GDL transformation, we were restricted by the fact that students were not randomly assigned

to attend one of the GDL academies or another high school. In the absence of random assignment, observed differences between GDL and non-GDL students could be due to pre-existing differences between the students (e.g., ability and motivation) rather than exposure to the transformation. By matching GDL students to non-GDL students with similar 8th grade characteristics and test performance observed in the data, we were able to rule out these measured factors as causing outcome differences between matched GDL and non-GDL students. This provided some credibility to claims that the observed differences were due to GDL transformation. We were not, however, able to rule out the possibility that some pre-existing factors (absent from the available data and the matching process) explained the observed group differences instead of the transformation.

Even if our quasi-experimental design perfectly adjusted for pre-existing differences between GDL and non-GDL students, three other factors complicated our ability to interpret group differences as causal effects. First, as previously stated, we did not have outcome data for students who left GDL and LAUSD. Given that there were some differences in school persistence between the matched GDL and non-GDL students, the reported end-of-year outcome effects failed to account for any selective dropout effect. Additionally, we found differences in the math courses that GDL students took at specific times during high school compared to the matched non-GDL students. This differentiation may have weakened the comparability of the matched groups for the analysis of the CST Math outcomes, since students had to have CST scale scores for a specific math subtest to be included in the analysis. Similarly, missing data for some outcomes may have weakened the comparability of the matched groups for the analysis of those outcomes.

Furthermore, our analysis was restricted by available time and resources, which limited our ability to examine the results for different student subgroups and to investigate interesting secondary questions that arose during the analysis. These limitations will also be addressed in recommendations section of this report.

Summary of Findings

Analyzing the matched samples of students, we found that GDL students performed better on multiple indicators than they would have if they had attended a demographically comparable LAUSD high school. Statistically significant, positive effects generally were more prevalent for Cohort 2, who started as 9th graders in 2008-2009, than for Cohort 1, who started in 2007-2008 prior to GDL's complete transition. For example, compared to the matched non-GDL students, GDL students in Cohort 2 were statistically more likely to stay in the same school over time, take and pass some of the key 9th, 10th, and 11th grade college

preparatory courses, take and pass eight or more key college preparatory courses, score higher on the CAHSEE on their first attempt, and pass the CAHSEE by the end of 11th grade. Moreover, performance on CST scores was promising; virtually every descriptive comparison favored GDL students. Statistically significant differences were found for the GDL Cohort 1 and 2 students in the area of math. Specifically, Cohort 1 GDL students had statistically higher CST scores in geometry at 9th grade, in Algebra II in 10th grade, and in summative high school math in 11th grade. Cohort 2 GDL students had statistically higher CST scores in Algebra I and geometry at 9th grade, in geometry and Algebra II in 10th grade, and in Algebra II and summative high school math in 11th grade. These results are even more impressive given the increased persistence rates for GDL; presumably, GDL is retaining students who might have dropped out and were likely to be among the lowest performing students.

Further, even as GDL Cohort 2 shows more statistically significant, positive effects than does Cohort 1, Cohort 1 graduation and college readiness rates, as judged by A-G completion, are impressive. For students who remained at their schools for four years, GDL graduation rates were 24 percentage points higher than that for the comparison group. Further, college readiness rates were 34 percentage points higher for GDL graduates than for comparison group graduates (Cohort 2 students were in 11th grade and had not yet progressed to graduation at the time of the study).

In conclusion, Green Dot Public School's transformation of Alain Leroy Locke High School is an impressive success story in many ways. First, previous charter school evaluations have generally not found such consistent positive effects on student achievement as we did in our study, which used a strong quasi-experimental design with a propensity score matching method. Secondly, GDL accomplished positive effects on student achievement while maintaining a student population similar to its original population prior to transformation and to the control schools used in the study. Lastly, given the pattern of increasingly positive results for Cohort 2 students, even stronger results may well materialize for successive cohorts and as Cohort 2 students progress through high school and graduation. As GDL's story progresses, future chapters on additional cohorts of students may further solidify the evidence base.

Recommendations

In the previous report (Herman, et al., 2011), we approached the college readiness question tentatively by focusing on four main subjects and analyzing key courses in those subject areas. We recommended that, in light of the emphasis Green Dot places on college

readiness, Green Dot should regularly collect A-G completion information for future analysis. For the current evaluation, Green Dot Public Schools took action on our recommendations and made their students A-G completion indicators available for analysis, and we found positive effects on GDL's A-G completion rates. We would like to praise Green Dot on its efforts to act on our suggestions throughout the evaluation. We encourage Green Dot's and GDL's continued attention to the following two recommendations:

We strongly feel that Green Dot should continue to document school improvement and student academic progress at GDL. Moreover, access to comprehensive longitudinal data is essential. For that reason, we urge GDL to re-integrate with the LAUSD data system to the greatest extent possible. For the sake of comparability across years, it is imperative for GDL to maintain consistent course codes as well as a steady record of the content included in equivalent courses. Lastly, GDL should acquire all previous academic records of incoming students and continue to collect key academic and demographic information in a format that is easily linked to historical data.

Furthermore, we noticed that both GDL and LAUSD lost about 30% of students between the fall semester of 9th grade and the fall semester of 10th grade. There also seemed to be a big drop in retention rates between the fall and spring semesters. LAUSD and Green Dot leaders could ponder creative ways to engage students during the summer and motivate them to return in the fall semester—especially during the summer before 9th grade students return as 10th graders.

We also encourage GDL to conduct follow-up evaluations of students. Considering that GDL implementation was only partial in 2007-08, the data requested here could not track the effects of full implementation on student graduation and college readiness. The pattern of increasingly positive results for Cohort 2 students is encouraging that GDL effects on Cohort 2 students' graduation rates and completion of college readiness courses will be even more positive than those reported for Cohort 1.

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Appendix A:

Demographic Characteristics and Achievement of the Freshmen at GDL and LAUSD

For each cohort of freshmen, student demographic characteristics as well as achievement data were compared for:

- All entering GDL freshmen,
- entering GDL freshmen who attended a GDL feeder middle school,
- entering freshman at one of three control schools who attended a GDL feeder middle school, and
- entering freshman at any other LAUSD high school that attended a GDL feeder middle school.

As discussed earlier in the data and methodology section, feeder middle schools are the six schools that the majority of GDL students attended in their 8th grade year. Control high schools (Fremont, Jordan, and Washington Preparatory) are the top three high schools attended by students from the feeder middle schools. We considered these three control schools as the schools GDL students would have most likely attended if they had not attended GDL.

Tables with complete student characteristics for each cohort are reported here. While the tables show comparisons across all four groups, the primary comparison is between GDL students and students at the control schools who attended the same feeder middle schools. As shown in these tables, GDL students who attended the feeder middle schools had demographic characteristics similar to control school students who also attended the same feeder middle schools. For example, in both cohorts of GDL and control schools, African American and Latino students comprised 99% to 100% of the student body. Moreover, special education students represented 7% to 10% of the GDL and control school students. Results show that GDL feeder school students who went on to attend GDL or one of the three control high schools were more like each other than those who went on to attend other LAUSD high schools. Please see Tables A1 thru A4 for a more complete breakdown of student characteristic variables by cohort and group status.

Table A1

Cohort 1 Entering Freshmen's 8th Grade Student Characteristics by Group Status, 2006-07

| | | | Attended GDL feeder middle schools | | | | | |
| | All freshmen @ GDL | | Freshmen @ GDL | | Freshmen @ control HS | | Freshmen @ other LAUSD schools | |
8th grade characteristics	N	%	N	%	N	%	N	%
Gender								
Female	108	54	93	53	760	50	208	59
Male	93	46	81	47	761	50	145	41
Total	201		174		1521		353	
Race/Ethnicity								
Black / Afr. Am.	45	22	37	21	306	20	131	38
Latino / Hispanic	155	77	136	78	1205	79	213	61
Other	1	0	1	1	10	1	3	1
Total	201		174		1521		347	
Parent's education								
Less than high school	49	24	45	26	464	31	81	24
High school	36	18	27	16	370	25	88	26
Some college	4	2	3	2	26	2	8	2
Unknown*	108	54	95	56	618	42	163	48
Total	201		170		1478		340	
Nat'l school lunch program								
Participant	166	83	141	81	1215	80	272	77
Non-participant	33	16	31	18	305	20	81	23
Unknown	2	1	2	1	3	0	0	0
Total	201		174		1523		353	
Language classification								
English learner	89	44	78	45	615	40	54	15
English Only	52	26	42	24	352	23	143	41
IFEP	0	0	0	0	54	4	15	4
RFEP	58	29	52	30	494	32	141	40
Unknown	2	1	2	1	8	1	0	0
Total	201		174		1523		353	

	All freshmen @ GDL		Attended GDL feeder middle schools					
			Freshmen @ GDL		Freshmen @ control HS		Freshmen @ other LAUSD schools	
8th grade characteristics	N	%	N	%	N	%	N	%
Special ed. participation								
Participant	21	10	17	10	108	7	11	3
Non-participant	180	90	157	90	1415	93	342	97
Total	201		174		1523		353	

*The Unknown category represents cases missing data. This represents 0-1% of the data for most student characteristics. The exception is Parent's Education where we see a large portion (up to 56%) of the data missing for both GDL and LAUSD students. We generally assume that the data missing from this variable is for parents with lower levels of education.

Table A2

Cohort 2 Entering Freshmen's 8th Grade Student Characteristics by Group Status, 2007-08

| | All freshmen @ GDL | | Attended GDL Feeder middle schools | | | | | |
| | | | Freshmen @ GDL | | Freshmen @ control HS | | Freshmen @ other LAUSD HS | |
8th grade characteristics	*N*	%	*N*	%	*N*	%	*N*	%
Gender								
Female	311	49	280	48	741	50	170	54
Male	328	51	302	52	735	50	147	46
Total	639		582		1476		317	
Race/Ethnicity								
Black / Afr. Am.	167	26	146	25	303	21	94	30
Latino / Hispanic	466	73	432	74	1165	79	220	69
Other	6	0	4	1	8	1	3	1
Total	639		582		1476		317	
Parent's education								
Less than high school	173	27	160	27	578	39	83	28
High school	138	22	122	21	335	23	95	32
Some college	20	3	18	3	55	4	2	1
Unknown*	308	48	282	48	508	34	120	40
Total	639		582		1476		300	
Nat'l school lunch program								
Participant	554	87	507	87	1235	84	267	84
Non-participant	82	13	74	13	238	16	49	15
Unknown	3	1	1	0	3	0	1	0
Total	639		582		1476		317	
Language classification								
English learner	228	36	209	36	581	39	53	17
English Only	193	30	170	29	343	23	108	34
IFEP	26	4	26	4	50	3	16	5
RFEP	189	30	176	30	498	34	139	44
Unknown	3	0	1	0	4	0	1	0
Total	639		582		1476		317	

	All freshmen @ GDL		Freshmen @ GDL		Freshmen @ control HS		Freshmen @ other LAUSD HS	
			Attended GDL Feeder middle schools					
8th grade characteristics	N	%	N	%	N	%	N	%
Special ed. participation								
Participant	63	10	52	9	105	7	12	4
Non-participant	576	90	530	91	1371	93	305	96
Total	639		582		1476		317	

*The Unknown category represents cases missing data. This represents 0-1% of the data for most student characteristics. The exception is Parent's Education where we see a large portion (up to 56%) of the data missing for both GDL and LAUSD students. We generally assume that the data missing from this variable is for parents with lower levels of education.

Table A3

Cohort 1 Entering Freshmen's 8th Grade CST Mean Scores & Performance Levels by Group Status, 2006-07

	All freshmen @ GDL			Freshmen @ GDL			Freshmen @ control HS			Freshmen @ other LAUSD HS		
				Attended GDL Feeder Middle Schools								
CST taken	No. tested	Mean score	% adv-prof-basic	No. tested	Mean score	% adv-prof-basic	No. tested	Mean score	% adv-prof-basic	No. tested	Mean score	% adv-prof-basic
ELA	201	289	35	174	287	31	1523	288	36	353	319	60
Math												
Algebra 1	104	275	18	90	273	17	926	264	11	263	291	35
General	97	274	20	84	274	20	590	277	22	79	280	28

Table A4

Cohort 2 Entering Freshmen's 8th Grade CST Mean Scores and Performance Levels by Group Status, 2007-08

| | All freshmen @ GDL | | | Attended GDL feeder middle schools | | | | | | | | |
| | | | | Freshmen @ GDL | | | Freshmen @ control HS | | | Freshmen @ other LAUSD HS | | |
CST taken	No. tested	Mean score	% adv-prof-basic	No. tested	Mean score	% adv-prof-basic	No. tested	Mean score	% adv-prof-basic	No. tested	Mean score	% adv-prof-basic
ELA	639	293	39	582	293	40	1476	291	40	317	319	64
Math												
Algebra 1	284	282	30	270	282	30	1081	268	19	259	291	36
General	355	273	20	312	274	21	389	273	21	47	275	21

Appendix B:
Cohort Specific Descriptives

In this section, we reported the cohort-specific descriptive results for Cohort 1 and 2 students on a set of student outcome measures including: school persistence, attendance, course enrollment and completion, as well as on standardized tests over time and the end-of-high school indictors such as A-G completion and graduation. Descriptive analyses sought to provide information of how the two cohorts of students at GDL and the three LAUSD control high schools performed on various student outcomes. The analysis is based on the original cohorts of 9th graders who started at GDL and the control high schools, in 2007-08 for Cohort 1 students and in 2008-09 for Cohort 2 students. The results are based on students with available data.

Persistence

Using course enrollment data, Figures B1 and B2 display cohort trends for individual student persistence over time for GDL and control students. Cohort 1 included the 2007-08, 2008-09, 2009-10, and 2010-11 school years; and Cohort 2 included the 2008-09, 2009-10, and 2010-11 school years. The persistence data are reported by class year (i.e., freshman, sophomore, and junior year).
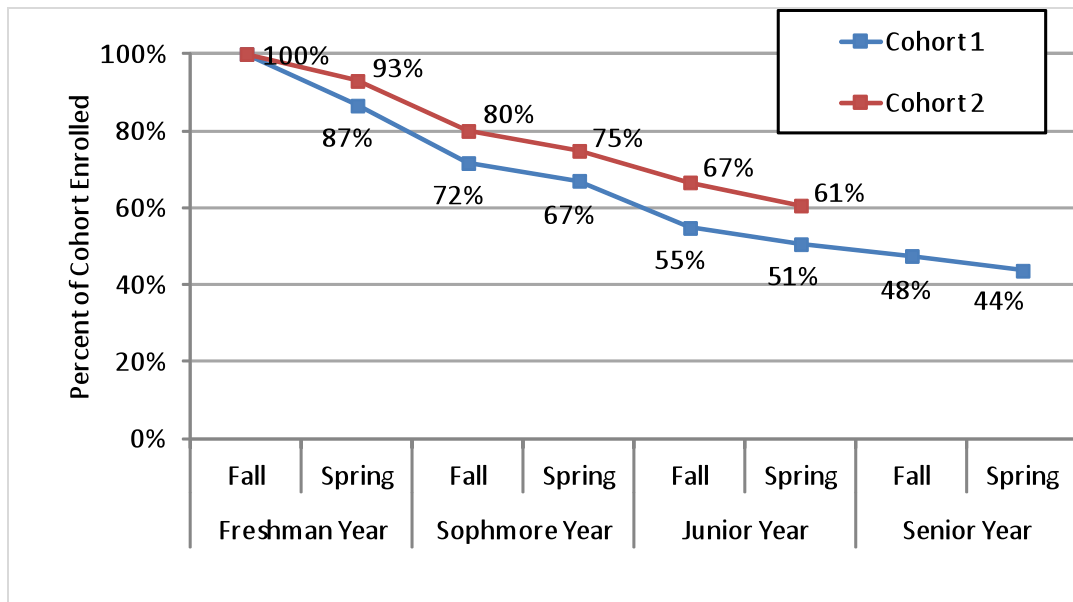
*Figure B1.*Green Dot Locke's persistence based on course-taking for Cohorts 1 and 2 Students (Source: Green Dot data files).
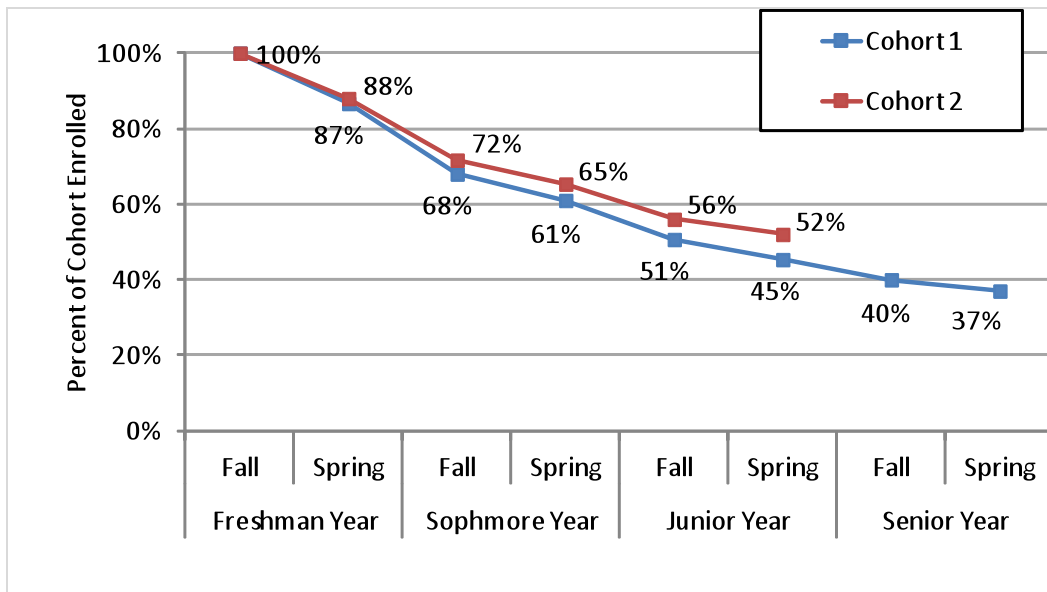
Figure B2. LAUSD control schools' average persistence based on course-taking for Cohorts 1 and 2 Students (Source: LAUSD data files for Fremont, Jordan, and Washington Preparatory High Schools).

Figure B1 shows that longitudinal retention among GDL Cohort 2 students was higher than that of Cohort 1. By the end of their junior year, Cohort 2 GDL students had a ten percentage-point higher persistence rate (from 51% of the original Cohort 1 to 61% of the original Cohort 2)—meaning more students continuously attended GDL from their freshman year to the end of their sophomore year. Likewise, Figure B2 shows that the control students had a slight increase in the average persistence rate from Cohort 1 to Cohort 2. By the end of their junior year, control school students in Cohort 2 (52%) had a seven percentage-point persistence rate than their peers in Cohort 1 (45%).

Comparing Figures B1 and B2, we observed that GDL retained more students than the control high schools. At the end of high school (spring of senior year), GDL's Cohort 1 students' persistence rate (44%) was seven percentage points higher than the control students' persistence rates (37%). For Cohort 2, GDL students had a nine percentage-point increase over the control students' persistence rates (61% continuously attended GDL compared to 52% at the control schools).

Although the GDL students' persistence rate has increased in relation to prior years (see Figure B1) and in relation to the control schools (see Figures B1 and B2), it must still be noted that large numbers of students left school, both GDL and LAUSD, before starting their sophomore year. While some of these students may have gone to attend other schools, it is possible that many of them dropped out.

Attendance

School attendance rates were computed by averaging the sum of total days attended for each student by the sum of total possible attendance days. Cohort 1 included the 2007-08, 2008-09, 2009-10, and 2010-11 school years; Cohort 2 included the 2008-09, 2009-10, and 2010-11 school years. Tables B1 and B2 display attendance data for GDL students along with the parallel information for the control students at the three control schools, by Cohort 1 and Cohort 2.

Table B1

Attendance Rates for Cohort 1 Students at Green Dot Locke and Control LAUSD Schools

Year	Control Group			Green Dot Locke Group		
	Number of Students	Mean Attendance Rate	% Above 80% Attendance	Number of Students	Mean Attendance Rate	% Above 80% Attendance
2010-11	1260	90%	87%	159	90%	87%
2009-10	1437	91%	89%	187	91%	90%
2008-09	1922	91%	88%	215	90%	87%
2007-08*	2398	89%	85%	261	93%	95%

*2007-08 was the initial year of GDL transformation with two academies of 261 9th grade students; the majority of students were still being served by LAUSD at the Alain Leroy Locke site.

Table B2

Attendance Rates for Cohort 2 Students at Green Dot Locke and Control LAUSD Schools

Year	Control Group			Green Dot Locke Group		
	Number of Students	Mean Attendance Rate	% Above 80% Attendance	Number of Students	Mean Attendance Rate	% Above 80% Attendance
2010-11	1531	90%	88%	639	90%	85%
2009-10	1774	92%	90%	723	90%	87%
2008-09	2221	91%	88%	816	90%	88%

Overall, the attendance rates for GDL students remained consistent at around 90%, from 2008-09 to 2010-11, for both Cohort 1 and Cohort 2 students, with the exception of a slightly higher mean attendance rate (93%) for Cohort 1 students in 2007-08 (freshman year). Compared to the GDL students' attendance rates in the same period, the control group

students had similar attendance rates; attendance rates for the control schools ranged from a low of 89% for Cohort 1 in 2007-08 (freshman year) to a high of 92% for Cohort 2 in 2009-10 (sophomore year).

Course-taking and Completion

Course-taking data were available for students who were enrolled at the GDL schools in the fall and spring semesters of the 2007-08, 2008-09, 2009-10, and 2010-11 academic years. Cohort 1 students entered ninth grade in the fall of 2007. Eight semesters of course-taking data through spring 2011 are available for these students. Cohort 2 students entered ninth grade the subsequent year in the fall of 2008 and six semesters of course-taking data are available. Four subject areas, (i.e., English, math, science, and social science) and thirteen key courses were used to describe students' course-taking and completion because they correspond to the University of California (UC) or the California State University (CSU)'s A-G subject requirements. Note that in order to be flagged as "passing" a course, a letter grade of "C" or better must have been received. Please see Appendix Table B3 for the specific courses we selected as key courses for both GDL and its control schools.

Table B3

List of Courses Selected as Key Courses

	GDL Group		Control Group	
Course	Fall	Spring	Fall	Spring
English 9	English 9A	English 9B	English 9A	English 9B
English 10	English 10A	English 10B	English 10A	English 10B
English 11	English 11A	English 11B: Amer. Lit.	Am Lit Comp	Am Lit Comp
English 12	English 12A	English 12B	Contemp Comp	Contemp Comp
Algebra I	Algebra 1A	Algebra 1B	Algebra 1A	Algebra 1B
Geometry	Geometry A	Geometry B	Geometry A	Geometry B
Algebra II	Algebra 2A	Algebra 2B	Algebra 2A	Algebra 2B
Trig/Pre-Calc.	Trig A or Pre Calc A	Trig B or Pre Calc B	Trig/Math An A	Trig/Math An B
Biology	Biology A	Biology B	Biology A	Biology B
Chemistry	Chemistry A	Chemistry B	Chemistry A	Chemistry B
Physics	Physics A	Physics B	Physics A	Physics B
World History	World History A	World History B	WHG: Mod Wld A	WHG: Mod Wld B
U.S. History	U.S. History A	U.S. History B	US Hist 20th A	US Hist 20th B

There were 261 Cohort 1 students enrolled at GDL in fall 2007. A majority (53%) of Cohort 1 students were enrolled in at least two key courses and 34% enrolled and passed at least two key courses in fall 2007. Key course enrollment figures peaked in spring 2010. Ninety-three percent of Cohort 1 students were enrolled in at least two key courses with seven-in-ten (71%) passing at least two key courses in spring 2010. However, by spring 2011, Cohort 1 students' last semester in high school, key course enrollment and pass rates had decreased to 67% and 41%, respectively. Please see Table B4 for more detailed information.

Table B4

Green Dot Locke Students' Course Enrollment & Completion for Cohort 1, Fall 2007-
Spring 2011

Courses	2007-2008		2008-2009		2009-2010		2010-2011	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
English 9								
Total enrolled	108	88	2	2	2	--	3	5
Total passed[1]	81	82	2	1	1	--	1	1
Pass rate (%)	75	93	100	50	50	--	33	20
English 10								
Total enrolled	--	--	128	120	5	6	2	1
Total passed	--	--	103	96	4	5	2	0
Pass rate (%)	--	--	80	80	80	83	100	0
English 11								
Total enrolled	--	--	--	--	135	127	7	8
Total passed	--	--	--	--	85	90	5	5
Pass rate (%)	--	--	--	--	63	71	71	63
English 12								
Total enrolled	--	--	--	--	--	--	123	114
Total passed	--	--	--	--	--	--	92	95
Pass rate (%)	--	--	--	--	--	--	75	83
Algebra I								
Total enrolled	108	63	9	6	4	4	1	3
Total passed	67	36	3	3	2	1	0	2
Pass rate (%)	62	57	33	50	50	25	0	67
Geometry								
Total enrolled	30	27	132	122	18	17	6	6
Total passed	22	20	66	66	3	4	5	2
Pass rate (%)	73	74	50	54	17	24	83	33
Algebra II								
Total enrolled	--	--	21	19	102	96	14	10
Total passed	--	--	15	16	73	68	3	5
Pass rate (%)	--	--	71	84	72	71	21	50
Trigonometry/Pre-Calculus								
Total enrolled	--	--	--	--	39	38	93	81
Total passed	--	--	--	--	32	32	57	53

Courses	2007-2008		2008-2009		2009-2010		2010-2011	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
Pass rate (%)	--	--	--	--	82	84	61	65
Biology								
Total enrolled	138	118	11	11	4	6	3	1
Total passed	94	95	6	6	1	5	2	0
Pass rate (%)	68	81	55	55	25	83	67	0
Chemistry								
Total enrolled	--	--	150	130	19	19	5	4
Total passed	--	--	69	90	6	10	4	3
Pass rate (%)	--	--	46	69	32	53	80	75
Physics								
Total enrolled	--	--	--	--	112	106	10	8
Total passed	--	--	--	--	87	82	6	3
Pass rate (%)	--	--	--	--	78	77	60	38
World History								
Total enrolled	--	--	107	101	4	5	2	2
Total passed	--	--	72	74	2	3	2	2
Pass rate (%)	--	--	67	73	50	60	100	100
U.S. History								
Total enrolled	--	--	--	1	121	113	2	4
Total passed	--	--	--	1	78	73	2	4
Pass rate (%)	--	--	--	100	64	65	100	100
Total grade enroll.[2]	261	226	186	183	169	156	146	135
Total ≥2 key course enroll.	138	115	168	154	155	145	102	91
≥ 2 key courses enroll. rate (%)	53%	51%	90%	84%	92%	93%	70%	67%
Total passing ≥ 2 key course	89	89	109	119	117	110	51	56
≥ 2 key courses pass rate (%)	34%	39%	59%	65%	69%	71%	35%	41%

[1]Includes students who received a grade of 'C' or higher. [2]Enrollment based on course-taking data.

Table B5 reports the corresponding information for GDL Cohort 2 students. GDL Cohort 2 differed from Cohort 1 in cohort size, and freshmen year's key course enrollment and passing rates. There were 816 students enrolled in Cohort 2 in fall of 2008, the first full class at GDL. This was triple the original enrollment of Cohort 1, which was only based on two small academies. Nearly every student (99%) was enrolled in at least two key courses and a majority (55%) passed at least two key courses in their freshmen year. The key course

passing rates for the sophomore and junior were compatible across these two cohorts. In spring 2011, 90% Cohort 2 students were enrolled in at least two key courses with nearly 68% passing at least two key courses.

Table B5

Green Dot Locke Students' Course Enrollment & Completion for Cohort 2, Fall 2008-Spring 2011

Courses	2008-2009		2009-2010		2010-2011	
	Fall	Spring	Fall	Spring	Fall	Spring
English 9						
Total enrolled	691	646	8	17	9	6
Total passed[1]	379	351	4	5	5	2
Pass rate (%)	55	54	50	29	56	33
English 10						
Total enrolled	--	--	518	463	15	11
Total passed	--	--	322	291	1	3
Pass rate (%)	--	--	62	63	7	27
English 11						
Total enrolled	--	--	1	1	409	381
Total passed	--	--	1	1	271	265
Pass rate (%)	--	--	100	100	66	70
English 12						
Total enrolled	--	--	--	--	2	2
Total passed	--	--	--	--	1	0
Pass rate (%)	--	--	--	--	50	0
Algebra I						
Total enrolled	708	521	80	88	29	24
Total passed	323	259	29	32	11	10
Pass rate (%)	46	50	36	36	38	42
Geometry						
Total enrolled	101	94	346	297	58	52
Total passed	82	74	161	159	32	34
Pass rate (%)	81	79	47	54	55	65
Algebra II						
Total enrolled	--	--	209	206	264	244
Total passed	--	--	126	128	132	147
Pass rate (%)	--	--	60	62	50	60

Courses	2008-2009		2009-2010		2010-2011	
	Fall	Spring	Fall	Spring	Fall	Spring
Trigonometry/Pre-Calculus						
Total enrolled	--	--	--	--	124	122
Total passed	--	--	--	--	92	81
Pass rate (%)	--	--	--	--	74	66
Biology						
Total enrolled	799	746	16	19	8	4
Total passed	569	518	3	3	1	0
Pass rate (%)	71	69	19	16	13	0
Chemistry						
Total enrolled	1	--	484	461	92	88
Total passed	0	--	290	286	58	54
Pass rate (%)	0	--	60	62	63	61
Physics						
Total enrolled	--	--	3	3	400	370
Total passed	--	--	3	3	293	313
Pass rate (%)	--	--	100	100	73	85
World History						
Total enrolled	7	7	552	518	17	12
Total passed	7	7	390	377	7	4
Pass rate (%)	100	100	71	73	41	33
U.S. History						
Total enrolled	--	--	9	8	410	376
Total passed	--	--	6	5	307	278
Pass rate (%)	--	--	67	63	75	74
Total grade enroll.[2]	816	760	667	634	575	530
Total ≥ 2 key course enroll.	811	716	631	593	520	479
≥ 2 key courses enroll. rate (%)	99%	94%	95%	94%	90%	90%
Total passing ≥ 2 key course	446	388	402	410	373	360
≥ 2 key courses pass rate (%)	55%	51%	60%	65%	65%	68%

[1]Includes students who received a grade of 'C' or higher. [2]Enrollment based on course-taking data.

Two corresponding tables on control students are presented in Appendix Tables B6 and B7. As shown, LAUSD students displayed a different course enrollment pattern compared to GDL students. In fall 2007, 78% of LAUSD students in Cohort 1 were enrolled in at least 2

key courses compared with 53% of GDL students in Cohort 1. However, while the percentage of GDL Cohort 1 students enrolled in key course enrollment increased from fall 2007 to spring 2011, LAUSD key course enrollment decreased. In spring 2011, 31% LAUSD students—compared to 67% GDL students—were enrolled in at least two key courses. GDL students displayed equivalent or higher pass rates than LAUSD student when comparing cohorts across years. For example, in spring 2011 only 14% of LAUSD students in Cohort 1 and 41% of GDL students in Cohort 1 passed at least two key courses. Likewise, in spring 2011 60% LAUSD students in Cohort 2 compared with 68% of GDL students in Cohort 2 passed at least two key courses.

Table B6

LAUSD Students' Enrollment and Completion Courses for Cohort 1, Fall 2007-Spring 2011

	2007-2008		2008-2009		2009-2010		2010-2011	
Course	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
English 9								
Total enrolled	1,905	1,456	68	45	6	17	28	26
Total passed[1]	1,173	836	40	24	3	10	22	18
Pass rate (%)	62	57	59	53	50	59	79	69
English 10								
Total enrolled	69	47	1,519	1,183	63	63	71	51
Total passed	28	22	967	750	23	33	34	32
Pass rate (%)	41	47	64	63	37	52	48	63
English 11								
Total enrolled	32	5	28	18	1,038	122	95	60
Total passed	7	0	12	11	628	76	61	30
Pass rate (%)	22	0	43	61	61	62	64	50
English 12								
Total enrolled	3	15	16	20	195	897	89	72
Total passed	2	1	4	11	141	534	54	26
Pass rate (%)	67	7	25	55	72	60	61	36
Algebra I								
Total enrolled	1,819	1,910	252	203	74	66	40	44
Total passed	914	868	69	51	21	19	17	24
Pass rate (%)	50	45	27	25	28	29	43	55

	2007-2008		2008-2009		2009-2010		2010-2011	
Course	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
Geometry								
Total enrolled	286	190	924	852	341	276	131	121
Total passed	187	117	444	364	145	113	83	59
Pass rate (%)	65	62	48	43	43	41	63	49
Algebra II								
Total enrolled	34	25	352	351	620	603	206	142
Total passed	23	15	188	202	303	330	81	54
Pass rate (%)	68	60	53	58	49	55	39	38
Trigonometry/Pre-Calculus								
Total enrolled	--	--	18	30	171	154	222	149
Total passed	--	--	13	25	92	96	127	101
Pass rate (%)	--	--	72	83	54	62	57	68
Biology								
Total enrolled	1,227	1,105	743	588	129	104	90	59
Total passed	516	518	335	285	53	41	51	30
Pass rate (%)	42	47	45	48	41	39	57	51
Chemistry								
Total enrolled	23	6	342	397	621	577	223	202
Total passed	3	--	162	228	359	343	139	125
Pass rate (%)	13	--	47	57	58	59	62	62
Physics								
Total enrolled	7	3	252	234	248	213	224	205
Total passed	--	--	107	105	145	110	152	142
Pass rate (%)	--	--	42	45	58	52	68	69
World History								
Total enrolled	68	68	1,386	1,346	57	45	80	61
Total passed	28	42	840	854	30	20	50	38
Pass rate (%)	41	62	61	63	53	44	63	62
U.S. History								
Total enrolled	36	17	40	29	1,191	1,105	110	94
Total passed	9	2	20	17	739	711	66	51
Pass rate (%)	25	12	50	59	62	64	60	54
Total grade enrollment[2]	2,668	2,339	1,907	1,760	1,489	1,351	1,213	1,143
Total ≥ 2 key course enrollment	2,072	1,642	1,795	1,545	1,366	1,191	466	360

Course	2007-2008		2008-2009		2009-2010		2010-2011	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
≥ 2 key courses enrollment rate (%)	78%	70%	94%	88%	92%	88%	38%	31%
Total passing ≥ 2 key course	945	703	1,046	907	866	772	226	163
≥ 2 key courses pass rate (%)	35%	30%	55%	52%	58%	57%	19%	14%
Total Key Course Enrollment	2,351	2,167	1,878	1,713	1,433	1,306	884	769
Key Courses Enrollment rate (%)	88%	93%	98%	97%	96%	97%	73%	67%

[1]Includes students who received a grade of 'C' or higher. [2]Enrollment based on course-taking data.

Table B7

LAUSD Students' Enrollment and Completion Courses for Cohort 2, Fall 2008-Spring 2011

Course	2008-2009		2009-2010		2010-2011	
	Fall	Spring	Fall	Spring	Fall	Spring
English 9						
Total enrolled	2,090	1,400	54	27	39	43
Total passed[1]	1,296	885	25	7	17	29
Pass rate (%)	62	63	46	26	44	67
English 10						
Total enrolled	59	34	1,516	1,493	146	117
Total passed	28	15	888	903	59	64
Pass rate (%)	47	44	59	60	40	55
English 11						
Total enrolled	8	4	28	3	745	462
Total passed	2	1	11	1	495	302
Pass rate (%)	25	25	39	33	66	65
English 12						
Total enrolled	5	3	3	23	546	584
Total passed	2	1	2	8	402	350
Pass rate (%)	40	33	67	35	74	60
Algebra I						
Total enrolled	1,869	1,243	223	196	105	94
Total passed	904	549	55	40	48	42
Pass rate (%)	48	44	25	20	46	45
Geometry						
Total enrolled	390	424	944	833	327	248
Total passed	247	264	437	404	190	120
Pass rate (%)	63	62	46	48	58	48
Algebra II						
Total enrolled	35	61	497	455	534	488
Total passed	19	49	288	299	228	225
Pass rate (%)	54	80	58	66	43	46
Trigonometry/Pre-Calculus						
Total enrolled	--	2	41	40	216	199
Total passed	--	2	30	34	155	133
Pass rate (%)	--	100	73	85	72	67

| | 2008-2009 | | 2009-2010 | | 2010-2011 | |
Course	Fall	Spring	Fall	Spring	Fall	Spring
Biology						
Total enrolled	1,156	1,273	695	601	175	156
Total passed	570	624	309	316	84	74
Pass rate (%)	49	49	44	53	48	47
Chemistry						
Total enrolled	9	14	477	450	741	682
Total passed	3	4	268	295	480	475
Pass rate (%)	33	29	56	66	65	70
Physics						
Total enrolled	4	3	349	331	170	147
Total passed	0	0	176	154	99	99
Pass rate (%)	0	0	50	47	58	67
World History						
Total enrolled	57	35	1,579	1,430	124	115
Total passed	24	14	965	830	52	54
Pass rate (%)	42	40	61	58	42	47
U.S. History						
Total enrolled	11	10	29	23	1,180	952
Total passed	7	7	12	10	769	662
Pass rate (%)	64	70	41	43	65	70
Total grade enrollment[2]	2,443	2,182	1,842	1,695	1,485	1,390
Total ≥ 2 key course enrollment	2,214	1,558	1,749	1,586	1,381	1,210
≥ 2 key courses enrollment rate (%)	91%	71%	95%	94%	93%	87%
Total passing ≥ 2 key course	1,050	755	1,024	958	975	833
≥ 2 key courses pass rate (%)	43%	35%	56%	57%	66%	60%

[1]Includes students who received a grade of 'C' or higher. [2]Enrollment based on course-taking data.

Student Achievement

We have four measures of student achievement: performance on the California Standards Test (CST) and on the California High School Exit Exam (CAHSEE), A-G completion, and graduation. Californian students in grades 2 to 11 are required to take CST every year; 10th grade is the first time they can take CAHSEE, and students can re-take it in

11th and 12th grade until they pass. And the last two measures of student achievement—A-G completion and graduation—are only applicable to students in Cohort 1 in 2010-11.

California Standards Test

Tables B8 and B9 below report the number of Cohort 1 students tested, mean scale scores, and the percentage of those students that scored at the basic, proficient, and advanced levels in ELA and math, for GDL students and students attending the three LAUSD control high schools. Tables B10 and B11 report the corresponding numbers for Cohort 2 students. While there is a general trend of improvement in the percentage of students who scored basic and higher in both math and ELA after 2007-08 at Green Dot Locke at the school-level (see Appendix C18 - C20), the results are mixed when observing student scale scores on CSTs by Cohort. Table B8 and B9 for Cohort 1 below show that while Green Dot Locke students in Cohort 1 generally outperform their control counterparts in both math and ELA from year to year, results show a decrease in mean scale scores as students progress in grade level for both GDL and control group students.

Table B8

ELA CST Results for Cohort 1 Students at Green Dot Locke and Control LAUSD Schools, 2006-07 to 2009-10

	Control Group			Green Dot Locke Group		
Year	Number Tested	% Adv-Prof-Basic	Mean Scale Score	Number Tested	% Adv-Prof-Basic	Mean Scale Score
2009-10	1581	41%	292	152	41%	293
2008-09	1860	46%	298	178	53%	300
2007-08	2172	47%	302	231	61%	314
2006-07*	2186	36%	289	212	34%	288

*2006-07 data reflect available 8th grade ELA CST results from feeder middle schools.

Table B9

Math CST Results for Cohort 1 Students at Green Dot Locke and Control LAUSD
Schools, 2006-07 to 2009-10

	Control Group			Green Dot Locke Group		
Year	Number Tested	% Adv-Prof-Basic	Mean Scale Score	Number Tested	% Adv-Prof-Basic	Mean Scale Score
2009-10	1403	7%	247	151	11%	253
2008-09	1781	6%	249	171	15%	262
2007-08	2165	15%	266	228	21%	277
2006-07*	2176	17%	270	211	18%	273

*2006-07 data reflect available 8th grade CST math results from feeder middle schools.

For Cohort 2, the mean scale score for math was generally higher than those of LAUSD control students; however, similar to results found in Cohort 1, the scores slightly decrease as students' progress in grade level for both control and GDL group students. For example, in 2009-10 (10th grade), the mean scale scores for math was 255 and 257 for the control and GDL group students, respectively; in 2010-11 (11th grade), the mean scale scores for control group students was 248 (7 points lower) and 254 for GDL students (4 points lower overall).

Table B10

ELA CST Results for Cohort 2 Students at Green Dot Locke and Control LAUSD
Schools, 2007-08 to 2010-11

	Control Group			Green Dot Locke Group		
Year	Number Tested	% Adv-Prof-Basic	Mean Scale Score	Number Tested	% Adv-Prof-Basic	Mean Scale Score
2010-11	1297	48%	299	509	47%	297
2009-10	1788	47%	298	628	45%	293
2008-09	2096	49%	302	759	48%	301
2007-08*	2095	41%	292	654	39%	292

Note. *2007-08 data reflect available 8th grade ELA CST results from feeder middle schools.

Table B11

Math CST Results for Cohort 2 Students at Green Dot Locke and Control LAUSD
Schools, 2007-08 to 2010-11

	Control Group			Green Dot Locke Group		
Year	Number Tested	% Adv-Prof-Basic	Mean Scale Score	Number Tested	% Adv-Prof-Basic	Mean Scale Score
2010-11	1201	7%	248	508	14%	254
2009-10	1744	8%	255	617	13%	257
2008-09	2077	12%	264	730	17%	269
2007-08*	2080	20%	271	642	24%	277

*2007-08 data reflect available 8th grade CST math results from feeder middle schools.

Tables B12 and B13 below reflect the number of students achieving basic or above across both ELA and math CST by cohort across years. While a higher percentage of GDL students are testing at basic and above than LAUSD students, the overall number of students achieving at basic or above in either Cohort 1 or Cohort 2 is still low (below a quarter of overall test-takers across both subjects each year).

Table B12

CST Results for Cohort 1 Students at Green Dot Locke and Control
LAUSD Schools, 2006-07 to 2009-10

	Control Group		Green Dot Locke Group	
Year	Number Tested	% Basic & Above	Number Tested	% Basic & Above
2009-10	1385	6%	150	9%
2008-09	1763	5%	171	12%
2007-08	2110	13%	228	20%
2006-07*	2143	13%	205	14%

*2006-07 data reflect available 8th grade ELA and math CST results
from feeder middle schools.

Table B13

CST Results for Cohort 2 Students at Green Dot Locke and Control
LAUSD Schools, 2007-08 to 2010-11

	Control Group		Green Dot Locke Group	
Year	Number Tested	% Basic & Above	Number Tested	% Basic & Above
2010-11	1179	6%	495	11%
2009-10	1726	7%	612	11%
2008-09	2054	10%	730	14%
2007-08*	2069	16%	639	19%

*2007-08 data reflect available 8th grade ELA and math CST results from
feeder middle schools.

California High School Exit Exam (CAHSEE)

California high school students cannot graduate without passing both the ELA and math sections of the CAHSEE. If students do not pass either the ELA or math portion of the CAHSEE, they can retake the test multiple times in 11th and 12th grade. To examine the effect of the GDL transformation on CAHSEE performance, we focused our analysis on the percentage of students who passed each section on the first attempt (10th grade), passed on any attempt by the end 2010-11 (12th grade for Cohort 1 and 11th grade for Cohort 2), and passed after failing the tests in 10th grade. Students were only selected for these analyses if they persisted in their respective GDL or control cohort though the end of each year indicated.

Table B14 reports the number and percentage of Cohort 1 students who tested and passed the ELA and math CAHSEE exams from 2008-2009 to 2010-2011. These years correspond to Cohort 1's 10th through 12th grade years, when the CAHSEE is administered to high school students. For Cohort 2 students, the 2009-2010 academic year was the first opportunity they took the CAHSEE exams. Thus, Table B15 provides Cohort 2's results for only 2009-2010 and 2010-2011.

Across both cohorts of students, the general pattern is that as GDL students approach graduation they are more likely to have passed the CAHSEE exams in comparison to the control students. For example, Cohort 1 GDL students had their first time passing rates of 51% for ELA and 47% for math while the rates were 55% for the control students on each exam correspondingly. By 12th grade the remaining Cohort 1 GDL students had me passing rates of 81% for ELA and 84% for math while the rates were 74% for ELA and 71% for

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math for the control students. Similarly, about 80%, of Cohort 2 GDL students had passed each exam by 11th grade while for the control students less that 67% had passed ELA and 68% had passed math.

Table B14

CAHSEE Results for Cohort 1 Students at Green Dot Locke & Control LAUSD Schools, 2008-09 to 2010-11

| | Control Group | | | | | | Green Dot Locke | | | | | |
| | ELA | | | Math | | | ELA | | | Math | | |
Year	# Tested	# Pass	% Pass	# Tested	# Pass	% Pass	# Tested	# Pass	% Pass	# Tested	# Pass	% Pass
2010-11												
≥ 2 attempts	193	94	49%	220	126	57%	22	8	36%	17	4	24%
Any attempt	1019	753	74%	1019	726	71%	114	92	81%	114	96	84%
2009-10												
≥ 2 attempts	429	190	44%	430	172	40%	55	27	49%	62	37	60%
Any attempt	1270	881	69%	1270	837	66%	132	103	78%	131	105	80%
2008-09*												
1st attempt	1245	688	55%	1244	680	55%	171	87	51%	170	80	47%

*First-time 10th grade test-takers only.

Table B15

CST Results for Cohort 2 Students at Green Dot Locke & Control LAUSD Schools, 2009-10 to 2010-11

| | Control Group | | | | | | Green Dot Locke | | | | | |
| | ELA | | | Math | | | ELA | | | Math | | |
Year	# Tested	# Pass	% Pass	# Tested	# Pass	% Pass	# Tested	# Pass	% Pass	# Tested	# Pass	% Pass
2010-11												
≥ 2 attempts	382	161	42%	381	161	42%	195	101	52%	180	97	54%
Any attempt	1317	881	67%	1317	892	68%	494	389	79%	493	395	80%
2009-10*												
1st attempt	1370	784	57%	1387	790	57%	587	328	56%	584	332	57%

*First-time 10th grade test-takers only.

Tables B16 and B17 below reflect the number of students passing both the ELA and math CAHSEE by cohort across years. Similar results were observed, GDL students had

higher combined passing rates than the control students as they approached graduation. For example, among the students who took the CAHSEE the first time, Cohort 2 GDL and control students each had an overall passing rate of 45%. By 11th grade, Cohort 2 GDL students' passing rates were 12% higher than for the control students.

Table B16

CAHSEE Results for Cohort 1 Students at Green Dot Locke & Control LAUSD Schools, 2008-09 to 2010-11

	Both ELA & Math					
	Control Group			Green Dot Locke Group		
Year	# Tested	# Pass	% Pass	# Tested	# Pass	% Pass
2010-11						
≥ 2 attempts	133	44	33%	13	1	8%
All Attempts	1019	650	64%	114	87	76%
2009-10						
≥ 2 attempts	297	58	20%	35	8	23%
All Attempts	1270	740	58%	131	94	72%
2008-09*						
1st Attempt	1233	526	43%	169	55	33%

*First-time 10th grade test-takers only.

Table B17

CST Results for Cohort 2 Students at Green Dot Locke & Control LAUSD Schools, 2009-10 to 2010-11

	Both ELA & Math					
	Control Group			Green Dot Locke Group		
Year	# Tested	# Pass	% Pass	# Tested	# Pass	% Pass
2010-11						
≥ 2 attempts	250	44	18%	130	36	28%
All Attempts	1317	772	59%	493	349	71%
2009-10*						
1st Attempt	1363	614	45%	581	261	45%

*First-time 10th grade test-takers only.

End-of-High School Measures

CRESST analyzed two measures of student end-of-high school outcomes: A-G completion and graduation. We focus the study of these two indicators on Cohort 1 students, (i.e., 9th grade students in 2007-08 who completed high school in 2010-11).

A-G Completion

Students who want to attend any school in the University of California (UC) or the California State University (CSU) systems as a freshman must complete a series of courses in high school classified under A-G subjects. Table B18 presents results by Cohort 1 and Cohort 2 in 2010-11. Results show that students at GDL completed A-G courses at a higher rate than their control school counterparts. As can be seen, the difference between GDL and LAUSD students are more prominent for Cohort 1; results show that less Cohort 2 GDL students are on track to complete A-G requirements.

Table B18

A-G On-Track Completion Rate Results for Students by Cohort, 2010-11

Cohort	Control Group			Green Dot Locke Group		
	Number of students	# A-G on track	% A-G on track	Number of students	# A-G on track	% A-G on track
Cohort 1	1143	191	17%	118	55	47%
Cohort 2	1390	283	20%	503	187	37%

Graduation

In 2010-11, GDL graduated its first cohort of students, 261 9th grade students started with Green Dot Locke in 2007-08. As such, Figure B3 shows that GDL students' graduation rate (42%) is higher compared to those of its control LAUSD students at the three control schools, with Washington Prep coming in a close second at 39%.
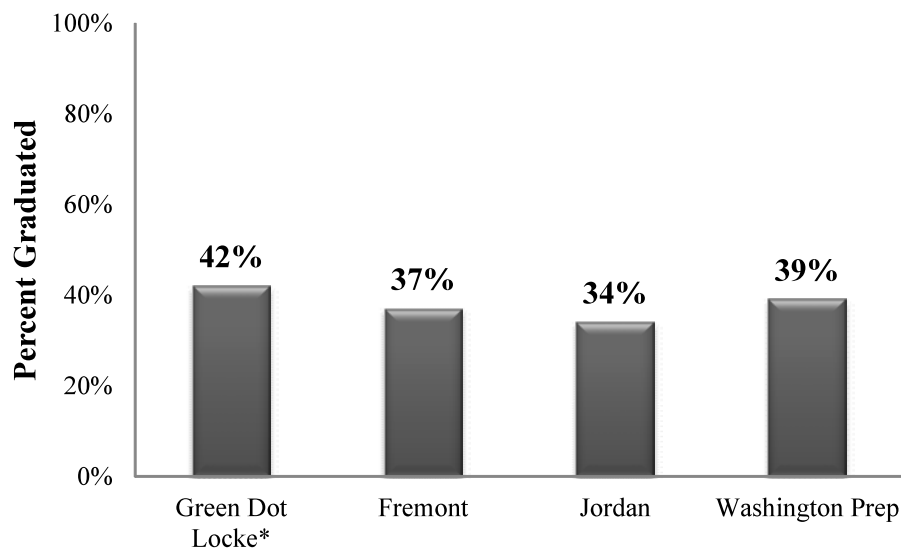
Figure B3. 2010-11 Four-Year Cohort Graduation Rates (Source: Green Dot files—
*based on the subgroup of 261 9th grade students enrolled with Green Dot Locke in
2007-08—and LAUSD School Data Summary Sheets).

In summary, we examined the cohort-specific descriptive patterns and trends of GDL students in terms of school persistence, school attendance, course-taking and completion, and standardized test scores. We found promising trends that point to increased retention rates, higher key course enrollment, and higher key course passing rates across cohorts relative to control students. The descriptive results on the ELA and math CST and CAHSEE were less consistent. GDL students were found to have higher math CST scale scores and were more likely to score basic or above in math CST across cohorts relative to control students, and Cohort 2 GDL students had compatible or higher passing rates than their matched control students and than Cohort 1 GDL students. In terms of end-of-high school measures for Cohort 1, it appeared that students attending GDL had been more successful in completing their A-G requirements and completing high school, when compared to control students at the three LAUSD control schools. With that said, these are descriptive results and sometimes based on small sample size, 261 students in GDL's Cohort 1, should be viewed with caution.

Appendix C:
General Descriptives

School Overview

As discussed in prior reports, three LAUSD high schools—Fremont, Jordan, and Washington Preparatory—were chosen as control schools in our study of GDL. Similar to its control schools, GDL's API scores have ranged between 500 and 600. Figure C1 below reflects a drop in GDL's API score from 2007-08 to 2008-09. As such, 2007-08 was the first year of the Green Dot Locke Transformation, with Green Dot opening two academies on the Alain Leroy Locke site. In this transitional year, LAUSD continued to serve the majority of Locke students and reported an API score of 511. Since fully taking over Alain Leroy Locke in 2008-09, GDL's API has been on an upward trend.
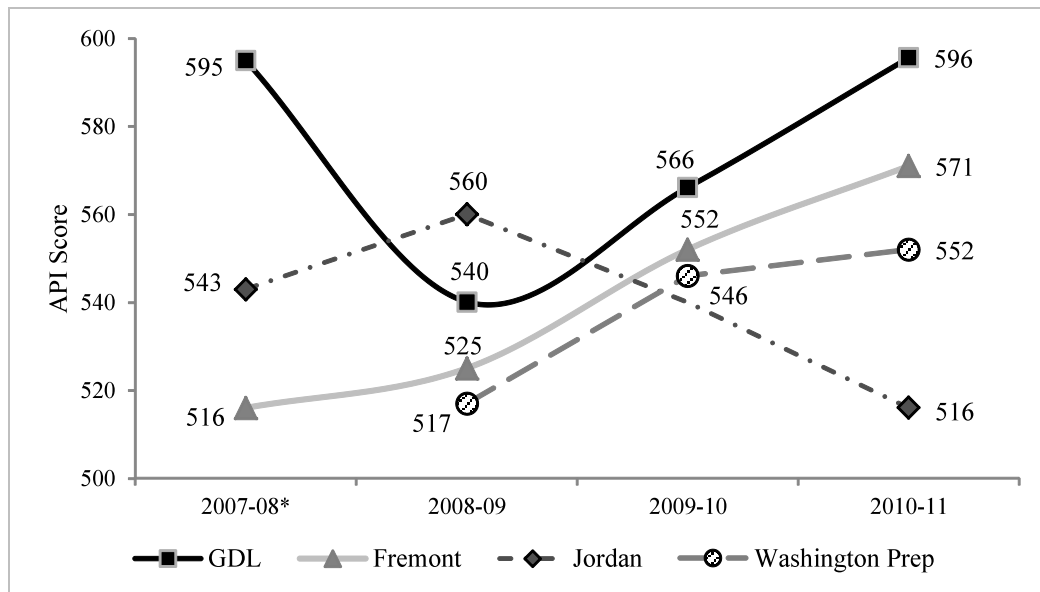
Figure C1. 2007-08 to 2010-11 API Scores for Green Dot Locke, Fremont, Jordan, and Washington Preparatory (Source: CDE DataQuest) No API was reported for Washington Preparatory in 2007-08 and Jordan in 2009-10: For at least one Standardized Testing and Reporting (STAR) content area used in the Academic Performance Index (API), the schools failed to test a significant proportion of students who were not exempt from testing in that school year.*Initial year of GDL transformation with two academies, 126 students - Animo Locke Technology and Animo Watts #2.

While enrollment at control schools dropped, the total enrollment at GDL gradually rose. Figure C2 shows that GDL enrollment increased from 2,867 students in 2007-08 (the year the transformation transition started) to 3,419 students in 2010-11.
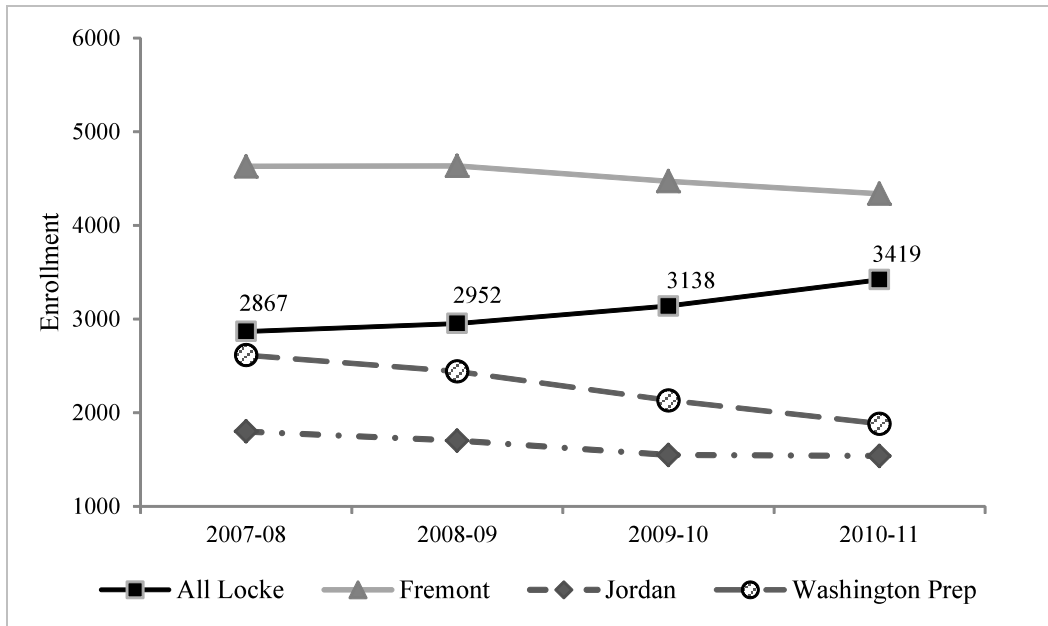
Figure C2. Total enrollment at Green Dot Locke, Fremont, Jordan, and Washington Preparatory (Source: CDE DataQuest). 2007-08 was the initial year of GDL transformation with two academies of 261 9th grade students; the majority of students were still being served by LAUSD at the Alain Leroy Locke site.

Figure C3 displays total enrollment at Locke by grade level. As shown, the number of entering ninth grade students fluctuates across years, while the number of eleventh and twelfth graders steadily increased, with the exception of 11th grade students in 2010-11. Coupled with the increase in overall school enrollment, this could be the result of higher demand for admission, across grade levels, and/or fewer students leaving GDL.
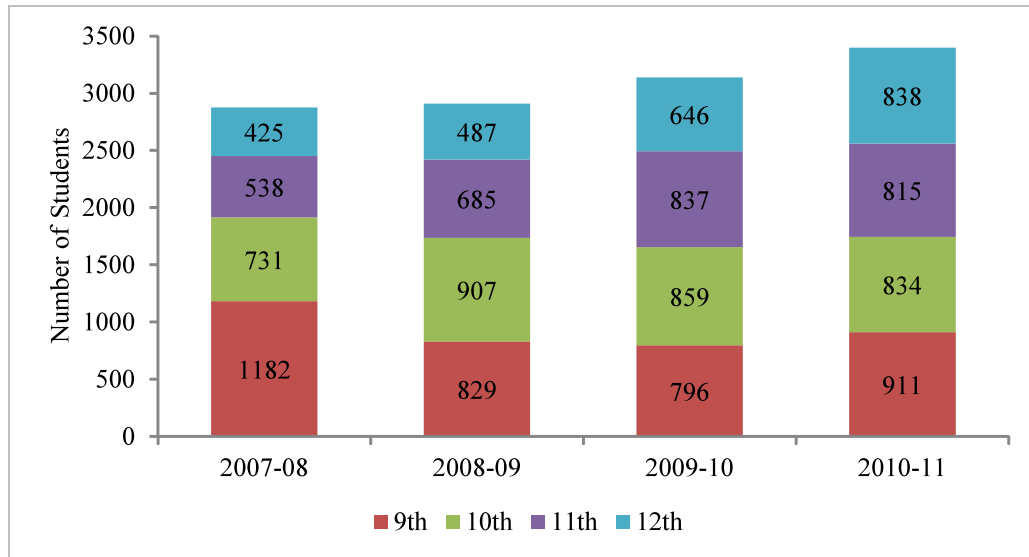
Figure C3. Green Dot Locke enrollment by grade level. (Source: CDE DataQuest). 2007-08 was the initial year of GDL transformation with two academies of 2619th grade students; the majority of students were still being served by LAUSD at the Alain Leroy Locke site.

Attendance

School attendance rates were computed by averaging the sum of total days attended for each student by the sum of total possible attendance days. Table C1 displays the attendance rate for GDL students by grade level over the past four years, along with the parallel information for the three control schools. Overall, the attendance rates for GDL students remained consistent at around 90%, from 2008-09 to 2009-10, for all students except 12th graders (whose rates were lower); in 2010-11, attendance rates were lower across all schools, GDL and LAUSD control schools with the exception of Washington Prep. Compared to the attendance rates for GDL students in the same period, the attendance rates at the three control schools were generally similar. For instance, students at Fremont and Washington Prep had slightly higher attendance rates and those at Jordan maintained slightly lower attendance rates.

Table C1

Attendance Rate by Grade for 2007-08, 2008-09, 2009-10, and 2010-11

School	9th	10th	11th	12th
Green Dot Locke				
2010-11	87%	88%	85%	79%
2009-10	91%	91%	88%	83%
2008-09	90%	90%	88%	86%
2007-08*	93%			
Fremont				
2010-11	85%	88%	90%	89%
2009-10	91%	93%	93%	94%
2008-09	92%	92%	94%	91%
2007-08	89%			
Jordan				
2010-11	88%	89%	87%	85%
2009-10	89%	88%	88%	83%
2008-09	86%	90%	86%	84%
2007-08	88%			
Washington Prep				
2010-11	93%	94%	94%	94%
2009-10	91%	93%	93%	93%
2008-09	88%	90%	88%	89%
2007-08	84%			

*2007-08 attendance data was only available for a subgroup of 9th grade students that were enrolled Gin GDL academies (Source: Green Dot and LAUSD files for Fremont, Jordan, and Washington Preparatory High Schools).

Course-taking and Completion

Course-taking data were available for students who were enrolled at the GDL schools in the fall and spring semesters of the 2007-08, 2008-09, 2009-10, and 2010-11 academic years. For the sake of consistency, when analyzing and comparing the student population across the years, the 2007-08 school year is not included because it only contained 9th graders. Four subject areas, (i.e., English, math, science, and social science) were used to describe students' course-taking and completion because they correspond to California's UC/CSU A-G subject requirements. Within each subject area, three to four key courses were identified to represent the subject area because successful completion of these key courses

would better prepare students to meet the A-G subject requirements. Note that in order to be flagged as "passing" a course, a letter grade of "C" or better must have been received.

English

We identified four core English courses (English 9, English 10, English 11, and English 12) per semester. The pass rate for 9th grade English 9 (A/B)—which in the past had been one of the first major bottlenecks on the path to college-eligibility—showed an overall increase from 2008-09 to 2010-11. From fall 2008 to fall 2010, the English (9A) pass rate increased by 11 percentage points. Similarly, the English (9B) pass rate increased by about 8 percentage points from spring 2009 to spring 2011. Increased pass rates were also observed for English 11A, 12A, 11B, and 12B but results were not as positive for English 10A and 10B (see Tables C2 and C3).

Table C2

Green Dot Locke Students' Enrollment and Completion of English Courses (Fall 2008, 2009, and 2010)

Course	Students	Fall 2010					Fall 2009					Fall 2008				
		9th	10th	11th	12th	Total	9th	10th	11th	12th	Total	9th	10th	11th	12th	Total
English 9A																
	# enrolled	808	24	10	13	855	713	13	4	2	732	654	9	8	6	677
	Passed[1]	558	10	4	9	581	463	9	3	1	476	368	8	7	5	388
	% pass rate	69	42	40	69	68	65	69	75	50	65	56	89	88	83	57
English 10A																
	# enrolled	13	606	20	53	692	8	653	66	46	773	1	576	39	13	629
	Passed	5	325	6	30	366	3	385	25	24	437	1	375	15	8	399
	% pass rate	38	54	30	57	53	38	59	38	52	57	100	65	38	62	63
English 11A																
	# enrolled	--	7	560	91	658	--	5	540	63	608	--	--	312	31	343
	Passed	--	4	384	59	447	--	1	304	34	339	--	--	173	16	189
	% pass rate	--	57	69	65	68	--	20	56	54	56	--	--	55	52	55
English 12A																
	# enrolled	--	--	1	465	466	--	--	3	355	358	--	--	5	289	294
	Passed	--	--	0	310	310	--	--	0	188	188	--	--	1	144	145
	% pass rate	--	--	0	67	67	--	--	0	53	53	--	--	20	50	49
Total core ELA enroll.		821	637	591	622	2,671	721	671	613	466	2,471	655	585	364	339	1,943
Total grade enrollment[2]		901	818	772	647	3,138	802	849	777	469	2,897	829	907	685	487	2,908
% enroll in core courses[3]		91	78	77	96	85	90	79	79	99	85	79	64	53	70	67

[1]Includes students who received a grade of 'C' or higher. [2]Enrollment based on course-taking data. [3]Enrollment greater than 100% as students are allowed to enroll in make-up courses in lower grades.

Table C3

Green Dot Locke Students' Enrollment and Completion of English Courses (Spring 2009, 2010, and 2011)

Course	Students	Spring 2011					Spring 2010					Spring 2009				
		9th	10th	11th	12th	Total	9th	10th	11th	12th	Total	9th	10th	11th	12th	Total
English 9B																
	# enrolled	802	27	8	15	852	731	21	10	2	764	696	6	3	2	707
	Passed[1]	496	6	5	9	516	505	7	5	0	517	369	2	2	2	375
	% pass rate	62	22	63	60	61	69	33	50	0	68	53	33	67	100	53
English 10B																
	# enrolled	17	603	16	49	685	6	582	65	34	687	2	397	28	15	442
	Passed	4	332	5	20	361	1	354	23	13	391	1	249	9	10	269
	% pass rate	24	55	31	41	53	17	61	35	38	57	50	63	32	67	61
English 11B																
	# enrolled	--	8	524	114	646	--	2	515	55	572	--	--	178	40	218
	Passed	--	4	381	53	438	--	1	294	21	316	--	--	89	20	109
	% pass rate	--	50	73	46	68	--	50	57	38	55	--	--	50	50	50
English 12B																
	# enrolled	--	--	1	445	446	--	--	1	312	313	--	--	4	143	147
	Passed	--	--	0	307	307	--	--	0	175	175	--	--	1	78	79
	% pass rate	--	--	0	69	69	--	--	0	56	56	--	--	25	55	54
Total core ELA enroll.		819	638	549	623	2,629	737	605	591	403	2,336	698	403	213	200	1,514
Total grade enrollment[2]		877	824	716	610	3,027	821	799	736	410	2,766	878	605	292	223	1,998
% enroll in core courses[3]		93	77	77	102	87	90	76	80	98	84	79	67	73	90	76

[1]Includes students who received a grade of 'C' or higher. [2]Enrollment based on course-taking data.
[3]Enrollment greater than 100% as students are allowed to enroll in make-up courses in lower grades.

Furthermore, across all grades, total enrollment in core ELA courses (as a percentage of total grade enrollment) was substantially higher and more consistent in the 2010-11 academic year as compared to 2008-09. In 2010-11 the percentage of total enrollment in core ELA remained constant around 85% to 87% from fall to spring, while in 2008-09 the percentage of total enrollment in core ELA classes increased from 67% to 76% (from the fall to spring). It is important to note that although the percentage of total enrollment in core ELA courses substantially increased over the two years, in 2008-09, the total grade enrollment numbers substantially decreased—from 2,908 to 1,998—between the two semesters that same year.

Math

The four core math courses identified for each semester were Algebra 1, Algebra 2, Geometry, and Trigonometry/Pre-calculus. Overall, from 2008-09 to 2010-11, total enrollment numbers in core math courses greatly increased across both fall and spring

semesters. However, total enrollment in core math courses (as a percentage of total grade enrollment) from 2008-09 to 2010-11 remained fairly constant. In both the fall and spring semesters of 2010-11, 73% of the total grade enrollment took core math courses compared with 72% and 70% in the fall and spring of 2008-09. Changes in the percent enrolled in core math courses from 2008-09 to 2010-11 were greatly influenced by academic grade (see Tables C4 and C5).

Table C4

Green Dot Locke Students' Enrollment and Completion of Math Courses (Fall 2008, 2009, and 2010)

Course	Students	Fall 2010					Fall 2009					Fall 2008				
		9th	10th	11th	12th	Total	9th	10th	11th	12th	Total	9th	10th	11th	12th	Total
Algebra 1A																
	# enrolled	758	75	47	18	898	681	133	78	29	923	664	150	42	9	865
	Passed[1]	350	33	20	6	409	392	47	26	9	474	309	66	17	5	397
	% pass rate	46	44	43	33	46	58	35	33	31	51	47	44	40	56	46
Geometry A																
	# enrolled	7	169	80	72	328	70	420	190	70	750	98	417	155	51	721
	Passed	6	102	47	48	203	47	196	83	35	361	78	212	64	33	387
	% pass rate	86	60	59	67	62	67	47	44	50	48	80	51	41	65	54
Algebra 2A																
	# enrolled	10	187	365	120	682	14	249	363	119	745	--	82	173	88	343
	Passed	9	121	178	61	369	14	136	248	77	475	--	60	96	36	192
	% pass rate	90	65	49	51	54	100	55	68	65	64	--	73	55	41	56
Trig. A/ Pre-Calc. A	# enrolled	--	14	145	232	391	--	3	70	86	159	--	1	60	96	157
	Passed	--	14	109	158	281	--	2	57	60	119	--	1	47	63	111
	% pass rate	--	100	75	68	72	--	67	81	70	75	--	100	78	66	71
Total core math enroll.		775	445	637	442	2,299	766	805	702	304	2,577	762	650	430	244	2,086
Total grade enrollment[2]		901	818	772	647	3,138	802	849	777	469	2,897	829	907	685	487	2,908
% enroll in core courses		86	54	83	68	73	96	95	90	65	89	92	72	63	50	72

[1]Includes students who received a grade of 'C' or higher. [2]Enrollment based on course-taking data.

Table C5

Green Dot Locke Students' Enrollment & Completion of Math Courses (Spring 2009, 2010, & 2011)

Course	Students	Spring 2011					Spring 2010					Spring 2009				
		9th	10th	11th	12th	Total	9th	10th	11th	12th	Total	9th	10th	11th	12th	Total
Algebra 1B																
	# enrolled	723	80	38	28	869	694	138	59	24	915	567	87	39	5	698
	Passed[1]	380	49	17	11	457	372	48	18	14	452	268	40	15	1	324
	% pass rate	53	61	45	39	53	54	35	31	58	49	47	46	38	20	46
Geometry B																
	# enrolled	10	185	78	68	341	63	365	181	61	670	95	313	77	18	503
	Passed	7	117	57	30	211	42	195	76	29	342	75	160	15	8	258
	% pass rate	70	63	73	44	62	67	53	42	48	51	79	51	19	44	51
Algebra 2B																
	# enrolled	7	193	329	115	644	15	240	338	107	700	--	37	73	32	142
	Passed	6	127	198	57	388	12	140	227	56	435	--	29	41	18	88
	% pass rate	86	66	60	50	60	80	58	67	52	62	--	78	56	56	62
Trig. B/ Pre-Calc. B	# enrolled	--	13	141	208	362	--	6	75	69	150	--	--	23	34	57
	Passed	--	12	95	132	239	--	3	55	41	99	--	--	7	21	28
	% pass rate	--	92	67	63	66	--	50	73	59	66	--	--	30	62	49
Total core math enroll.		740	471	586	419	2,216	776	746	653	261	2,436	662	437	212	89	1,400
Total grade enrollment[2]		877	824	716	610	3,027	821	799	736	410	2,766	878	605	292	223	1,998
% enroll in core courses		84	57	82	69	73	95	93	89	64	88	75	72	73	40	70

[1]Includes students who received a grade of 'C' or higher. [2]Enrollment based on course-taking data.

Students enrolled in GDL schools showed the most substantial math gains in Geometry (A/B). In the fall and spring of 2010-11, 62% of students passed the course with at least a "C"—8 percentage points higher than in the fall 2008 and 11 percentage points higher than in spring 2009. Also of note, the pass rate from 2008-09 to 2010-11 increased by 7 percentage points in Algebra 1B and 17 percentage points in Trig. B/Pre-Cal. B. Of the four math subjects at GDL, Trig. B/Pre-Calc had the highest pass rate in 2010-11—72% of students passed in the fall and 66% passed in the spring.

Science

The three core science courses identified for each semester were biology, chemistry, and physics. When comparing fall 2008 to fall 2010, the percent of those enrolled in a core science course from the total grade enrollment increased by 22 percentage points. Subsequently, from spring 2009 to spring 2011, the overall percentage of students enrolled in core science was unchanged at 74%. Interestingly, in the 2008-09 academic school year, the

percent enrolled in core science increased by 22 percentage points between the fall and spring semesters; however, in the 2009-10 and 2010-2011 academic school years, the percent enrollment in core science courses (as a percentage of total enrollment) remained constant between fall and spring at 68% and 74%, respectively. In terms of total enrollment in core science courses, in both the fall and spring enrollment substantially increased from 2008-09 to 2009-10 and again from 2009-10 to 2010-11 (see Tables C6 and C7).

Table C6

Green Dot Locke Students' Enrollment & Completion of Science Courses (Fall 2008, 2009, & 2010)

Course	Students	Fall 2010					Fall 2009					Fall 2008				
		9th	10th	11th	12th	Total	9th	10th	11th	12th	Total	9th	10th	11th	12th	Total
Biology A																
	# enrolled	539	254	14	11	818	486	70	68	28	652	803	92	38	12	945
	Passed[1]	376	131	5	6	518	289	33	21	18	361	572	41	15	8	636
	% pass rate	70	52	36	55	63	59	47	31	64	55	71	45	39	67	67
Chemistry A																
	# enrolled	1	446	146	64	657	3	558	185	60	806	1	351	73	33	458
	Passed	0	271	94	54	419	0	331	108	40	479	0	181	50	22	253
	% pass rate	0	61	64	84	64	0	59	58	67	59	0	52	68	67	55
Physics A																
	# enrolled	211	19	509	108	847	120	6	309	76	511	--	--	68	45	113
	Passed	103	11	364	63	541	80	3	238	58	379	--	--	58	35	93
	% pass rate	49	58	72	58	64	67	50	77	76	74	--	--	85	78	82
Total core sci enroll.		751	719	669	183	2,322	609	634	562	164	1,969	804	443	179	90	1,516
Total grade enroll[2]		901	818	772	647	3,138	802	849	777	469	2,897	829	907	685	487	2,908
% enroll in core courses		83	88	87	28	74	76	75	72	35	68	97	49	26	18	52

[1]Includes students who received a grade of 'C' or higher. [2]Enrollment based on course-taking data.

Table C7

Green Dot Locke Students' Enrollment and Completion of Science Courses (Spring 2009, 2010, and 2011)

Course	Students	Spring 2011					Spring 2010					Spring 2009				
		9th	10th	11th	12th	Total	9th	10th	11th	12th	Total	9th	10th	11th	12th	Total
Biology B																
	# enrolled	536	249	13	7	805	488	77	65	19	649	807	96	40	9	952
	Passed	380	148	4	3	535	308	39	31	11	389	544	42	18	6	610
	% pass rate	71	59	31	43	66	63	51	48	58	60	67	44	45	67	64
Chemistry B																
	# enrolled	--	438	142	75	655	5	527	175	45	752	2	323	68	30	423
	Passed	--	272	85	51	408	0	320	105	30	455	1	232	49	19	301
	% pass rate	--	62	60	68	62	0	61	60	67	61	50	72	72	63	71
Physics B																
	# enrolled	193	26	464	100	783	114	6	293	59	472	--	--	64	37	101
	Passed	100	14	392	53	559	72	3	207	33	315	--	--	47	24	71
	% pass rate	52	54	84	53	71	63	50	71	56	67	--	--	73	65	70
Total core sci. enroll.		729	713	619	182	2,243	607	610	533	123	1,873	809	419	172	76	1,476
Total grade enroll[2]		877	824	716	610	3,027	821	799	736	410	2,766	878	605	292	223	1,998
% enroll in core courses		83	87	86	30	74	74	76	72	30	68	92	69	59	34	74

[1]Includes students who received a grade of 'C' or higher. [2]Enrollment based on course-taking data.

Social Science

The two core social science courses identified were World History and US History. Overall, across three school years (2008-09 to 2010-11), the total number of students enrolled in core social science courses increased substantially. In fall of 2010, 1,334 students were enrolled in core social science courses as compared with 790 in the fall of 2008. In the spring of 2011, 1,299 of students were enrolled in core social science courses as compared with 642 in the spring of 2009. Gains also occurred in the percentage of students enrolled in core social science courses—27% vs. 43% from fall 2008 to fall 2010 and 32% vs. 43% from spring 2009 to spring 2011. In particular, there was a sharp increase in the percentage of students enrolled in core social science courses in grade 10. In regards to pass rates for core social sciences, there was little change from 2008-09 to 2010-11. Spring US History provides the lone exception. The pass rate for spring US History jumped 13 percentage points, from 59% to 72%, from 2008-09 to 2010-11 (see Tables C8 and C9).

Table C8

Green Dot Locke Students' Enrollment & Completion of Social Science Courses (Fall 2008, 2009, & 2010)

Course	Students	Fall 2010					Fall 2009					Fall 2008				
		9th	10th	11th	12th	Total	9th	10th	11th	12th	Total	9th	10th	11th	12th	Total
World Hist A																
	# enrolled	35	649	27	28	739	7	687	80	41	815	8	387	18	14	427
	Passed[1]	9	435	9	20	473	2	472	52	29	555	8	248	9	11	276
	% pass rate	26	67	33	71	64	29	69	65	71	68	100	64	50	79	65
US History																
	# enrolled	--	8	551	49	608	--	15	532	41	588	--	3	210	24	237
	Passed	--	7	411	38	456	--	10	333	23	366	--	2	159	17	178
	% pass rate	--	88	75	78	75	--	67	63	56	62	--	67	76	71	75
Total core social sci enroll		35	655	570	74	1,334	7	702	593	82	1,377	8	390	224	38	790
Total grade enroll[2]		901	818	772	647	3,138	802	849	777	469	2,897	829	907	685	487	2,908
% enroll in core courses[3]		4	80	74	11	43	1	83	76	19	48	1	43	33	8	27

[1]Includes students who received a grade of 'C' or higher. [2]Enrollment based on course-taking data. [3]Core social science enrollment does not include enrollment in U.S. Government or Economics.

Table C9

Green Dot Locke Students' Enrollment & Completion of Social Science Courses (Spring 2009, 2010, & 2011)

Course	Students	Spring 2011					Spring 2010					Spring 2009				
		9th	10th	11th	12th	Total	9th	10th	11th	12th	Total	9th	10th	11th	12th	Total
World Hist B																
	# enrolled	37	644	19	34	734	7	646	73	29	755	10	374	20	14	418
	Passed[1]	12	412	7	15	446	2	466	41	19	528	9	225	11	8	253
	% pass rate	32	64	37	44	61	29	72	56	66	70	90	60	55	57	61
US History																
	# enrolled	--	11	508	62	581	--	13	505	40	558	--	6	195	32	233
	Passed	--	9	374	34	417	--	8	318	24	350	--	6	113	18	137
	% pass rate	--	82	74	55	72	--	62	63	60	63	--	100	58	56	59
Total core social sci enroll		37	654	521	87	1,299	7	659	555	65	1,286	10	380	207	45	642
Total grade enroll[2]		877	824	716	610	3,027	821	799	736	410	2,766	878	605	292	223	1,998
% enroll in core courses[3]		4	79	73	14	43	1	82	75	16	46	1	63	71	20	32

[1]Includes students who received a grade of 'C' or higher. [2]Enrollment based on course-taking data. [3]Core social science enrollment does not include enrollment in U.S. Government or Economics.

Thus, for each key subject area there were noticeable increases in enrollment and pass rates, which provide preliminary evidence of student progress. In the subject area of English,

total enrollment in the four identified courses substantially increased from the 2008-09 to 2010-11 academic year. For 9th graders, English 9 (A/B) pass rates also increased from 2008-09 school year. In the subject area of math, total enrollment for the four identified courses also rose from the 2008-09 to 2010-11 academic year. Ninth graders' pass rates increased substantially from the previous school year in Geometry (A/B). In the subject areas of science and social science, total enrollment for the key core courses also substantially increased from 2008-09 to the 2009-10, but patterns of pass rates were mixed.

LAUSD Results

Course-taking data were also available for students who enrolled at LAUSD schools in the fall and spring semesters of the 2008-09, 2009-10, and 2010-11 academic years. Similar to GDL students, four subject areas, (i.e., English, math, science, and social science) were used to describe LAUSD students' course-taking and completion. Within each subject area, three to four key courses were identified. In order to be flagged as "passing" a course, a letter grade of "C" or better must have been received.

The passing rate in English language arts for students enrolled at LAUSD schools from 2008-09 to 2010-11 ranged from 55% to 68%. Total enrollment in core ELA courses (as a percentage of total grade enrollment) was substantially higher in the 2010-11 academic year as compared to 2008-09. In math, the passing rate for students enrolled at LAUSD schools from 2008-09 to 2010-11 varied considerably by math content area. In spring 2010, only 34% of LAUSD students passed Algebra 1B. In spring 2009, 72% of students passed Trig. B/Pre-Calc. B. Like English language arts, total enrollment in core math courses (as a percentage of total grade enrollment) increased from academic years 2008-09 to 2010-11.

The passing rate for students enrolled at LAUSD schools in science ranged from 44% in fall 2009 to 66% in spring 2011 and varied by subject. Interestingly, the passing rate for biology was significantly lower than that of chemistry or physics. Like ELA and math, total enrollment in core science courses (as a percentage of total grade enrollment) was substantially higher in the 2010-11 academic year as compared to 2008-09. Lastly, though passing rates in the social sciences were similar to the other four subject areas, total enrollment was considerably lower. From 2008-09 to 2010-11, enrollment in the social sciences (as a percentage of total grade enrollment) never reached 50% for any given semester (see Tables C10 to C17 or detailed tables).