Can Local Programs Keep Students in School? An Analysis of California's Learning Communities for School Success Grant Program

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Executive Summary

Background

The Every Student Succeeds Act (ESSA) grants states autonomy in picking a "fifth indicator" for K-12 education state accountability frameworks, which must by law measure academic proficiency, growth, graduation rates, and English language proficiency. California, like most states, uses chronic absenteeism - typically defined as students missing 10 percent or more of school days in a year - as its fifth indicator. Chronic absenteeism is highly predictive of later academic struggles, and California has signaled a commitment to reducing the number of students who consistently miss school, with the goal of promoting current and future student achievement, education attainment, and workforce outcomes.

A key component of the state's effort to combat chronic absenteeism is the Learning Communities for School Success (LCSS) grant program, part of the Safe Neighborhoods and Schools Act (SNSA) passed in 2014. Through the LCSS program, the California Department of Education makes competitive grant awards to local education agencies (school districts) to enact programs that "identify and implement evidence-based, non-punitive programs and practices to keep [our] most vulnerable students in schools." In addition to other initiatives to improve school climate, reduce exclusionary discipline, and provide comprehensive support services to students, the grants are specifically designed to "improve attendance and reduce combat chronic absenteeism" through strategies such as increasing staffing in districts to deal with attendance issues.[1]

In 2017, the department announced its first grant awards to 32 local education agencies, after a competitive application process in which districts submitted proposals for programming to address student engagement, school climate, and chronic absenteeism. While these proposals and programs at the district level were aligned to a similar goal, their implementation was heterogeneous in nature.[2] A key hypothesis of the program is that financial assistance to enable local provision of programs could improve student outcomes, particularly chronic absenteeism rates. With the fall 2018 release of district chronic absenteeism rates, we can now evaluate whether this program was a success, at least after the first year of the three-year grant.

Analysis

Our analysis uses data from the California Department of Education to assess whether grantee districts made improvements in the percentage of students identified as chronically absent from 2016-17 (the year in which the grant awards were announced) and 2017-18 (the first year of program implementation). The average chronic absenteeism rate for school districts in California was 12.59% in 2016-17. Data collected for this analysis cover all California school districts for which complete figures were available and include department data sets on chronic

[1] Quoted verbatim from "Request for Applications." California Department of Education. https://www.cde.ca.gov/fg/fo/r8/prop47rfa.asp

[2] For a logic model of the LCSS grant program, please see the appendix.

absenteeism rates by county, district, school, grade band, and student subgroups as well as overall student enrollment rates by race and a list of the 32 LCSS first-year grantee districts.

This report presents both descriptive and regression results, with the the central question of whether receiving an LCSS grant prior to the 2017-18 school year had a systematic impact on changes in districts' chronic absenteeism rates. The two regression approaches are described below:

- Linear Regression - Year-over-year change in district's chronic absenteeism rate as a function of grant award and district enrollment and demographics in both 2017 and 2018.
- Logistic Regression - Whether or not a district's chronic absenteeism rate declined in 2018 as a function of grant award and district enrollment and demographics in both 2017 and 2018.

Results

While the descriptive results indicate that overall chronic absenteeism rates declined by 0.26 percentage points for grant recipients, compared to an increase of 0.57 percentage points for all other districts, these results were largely driven by the middle school segment (Grades 7-8), where grant recipients saw chronic absenteeism rates decrease by one percentage point. On the other hand, we also find that non-recipients were more likely than recipients to see their rates decrease. Further, linear and logistic regression results do not show a statistically significant impact of the grant award on changes in chronic absenteeism rates.

In our main linear regression model, we find that the coefficients on grant award receipt are negative in three of the five models (all grades, Grades 7-8, Grades 9-12), suggesting that receiving a LSSC grant is associated with greater declines in chronic absenteeism rates. However, none of the three results are statistically significant, and coefficients for Grades 1-3 and 4-6 are positive (though lower in absolute magnitude and also not statistically significant). In the logistic model (which considers whether or not a district's chronic absenteeism rate declined from 2016-17 to 2017-18), there are also no significant results; coefficients are negative (indicating negative relationship between grant award and decline in absenteeism rate) in four of the five logit models.

Recommendations

Overall results of the first-year evaluation are mixed, with some grantee districts making strides towards decreasing absenteeism, but the results are not yet statistically significant or consistent. The California Department of Education should conduct implementation studies with grantee district to better understand what programs were implemented and which districts were successful at improving outcomes. It should also conduct follow-up analyses after the second and third years of the grant. At the highest level, evidence does not suggest that the grants make a tremendous impact on student outcomes and the state should approach additional scaling of the investment with caution.

Main Report

The LCSS grant program makes the bet that locally-developed and implemented programs can make a difference for improving school climate, student engagement, and student attendance, with the ultimate goal of positively affecting educational, workforce, and societal outcomes. Below, we describe the logic model for the grant program. The full logic model is presented in the appendix. Following discussion of the logic model, we present the results of the first-year program evaluation.

Logic Model

The logic model in the appendix describes the vision of the program, the population and needs to be addressed by the program, as well as program services, resources, desired outcomes, and evaluation indicators. It concludes with description of a research design to evaluate the effectiveness of the grant program at impacting school district chronic absenteeism rates in the short term.

Because it is a grant program, the resources dedicated to the LCSS program are reflective of the $37 million administered to local education agencies and the costs associated with management and administration of the funds. Districts then make their own decisions about how to use those funds, including the hiring of personnel to implement interventions. For example, Lodi Unified School District hired community liaisons with funding from the grant.[3] The services provided vary across grantee districts but will be generally aligned to the goals of the grant program, which are to impact school climate, student engagement, and attendance.

In the short term, the program hopes to impact chronic absenteeism rates, student academic achievement, student engagement, and school climate. These can be measured by attendance data collected by schools and submitted to the California Department of Education, standardized test scores (Smarter Balanced Assessment Consortium), and surveys of school and district stakeholders regarding climate and engagement in schools. In the long term, the program hopes to impact high school graduation rates, college-going rates, incarceration rates, and improve economic outcomes for students in school districts receiving the grants.

The remainder of this report describes the results of the first-year analysis of the impact of the program on chronic absenteeism rates as described in the research design section of the logic model.

[3] "Minutes of the Regular Meeting of the Board of Education." Lodi Unified School District, Sept 5, 2017. https://resources.finalsite.net/images/v1537816933/lodiusdnet/iwxuyssaxnxhz5uh4oxk/09-05-17_Minutes_-_Regular_Meeting_-_Signed.pdf

Data

Data for this analysis come from the California Department of Education, comprising five datasets across three archetypes:

- *California Learning Communities for School Success Program - Funding Results*: This dataset includes the 35 districts awarded a LCSS grant in 2017 and the amounts awarded. For the analysis, districts received a binary designation for whether or not they received the grant. District names were cleaned to facilitate merging with other datasets.[4]

- *Chronic absenteeism data* - Separate datasets for the 2016-17 and 2017-18 school years were used. These files detail chronic absenteeism rates by school and district, as well as records of total enrollment count. Only district records were kept for this analysis. In addition to district-wide counts, additional records detailed chronic absenteeism rates by specific grade bands (i.e., Grades 1-3, Grades 4-6, Grades 7-8, Grades 9-12), which were reshaped as additional variables at the district level.[5]

- *Enrollment Characteristics* - Separate datasets for the 2016-17 and 2017-18 school years were used. Similar in set-up to the chronic absenteeism files, these records contain counts of enrollment by race at the district, school, and grade band levels. The datasets were reshaped to have a file for each year unique at the district level with counts of student enrollment by race.[6]

After merging these files, our final analytic dataset was unique at the school district level, with variables indicating overall chronic absenteeism rate in 2016-17 and 2017-18 and rates for each grade band in each year; total enrollment in the district in each year; percent of total enrollment by white, Hispanic, Asian, and African-American students in each year; and indication of LCSS grant award. Additionally, we created variables indicating whether or not the district experienced a decrease in its chronic absenteeism rate from 2016-17 to 2017-18. This was done for each grade band and the district overall. We also dropped districts with an enrollment of less than 500 in either year, since smaller districts were more likely to have higher volatility in chronic absenteeism rates.

Methodology

We take a tiered approach to evaluation of the LCSS grant first-year implementation, with the ultimate goal of determining whether implementing programs enabled by the grant had

[4] "Funding Results." California Department of Education. https://www.cde.ca.gov/fg/fo/r8/lcssp2017results.asp
[5] "Chronic Absenteeism Data." California Department of Education. https://www.cde.ca.gov/ds/sd/sd/filesabd.asp
[6] "Enrollment by School." California Department of Education. https://www.cde.ca.gov/ds/sd/sd/filesenr.asp

an impact on districts' chronic absenteeism rates in 2017-18, the first year after the funds were distributed. We look at two metrics in particular that reflect dynamics in absenteeism rates:

- *Change in chronic absenteeism rate from 2016-17 to 2017-18* - This is calculated by subtracting the 2016-17 rate from the 2017-18 rate, meaning that a negative value for the change is indicative of a district that lowered its rate year-over-year. Because this is a continuous outcome, it is subject to substantial variation, with a small number of districts seeing changes of upwards of 30 percentage points year-over-year. It, along with analogous statistics calculated for different grade bands, is the primary dependent variable for the linear regression models and descriptive analyses which take the average value of the variable by group (i.e., grant recipients vs. non-recipients).

- *Decrease in chronic absenteeism rate* - This variable is a binary coding of whether or not the district experienced a decrease in its chronic absenteeism rate from 2016-17 to 2017-18 (as well as corresponding figures for different grade bands). Because it does not consider magnitude of an increase or decrease, it is less susceptible by outliers, providing a slightly different perspective than just the value of the change. It is the dependent variable in the logit models. It is also used in descriptive analyses which present the percentage of districts experiencing a decrease in chronic absenteeism rates, segmented by grant award.

In addition to the outcome measures and indicators for program participation, the regression models also include covariates that capture information on student and district characteristics. Because chronic absenteeism rates are often higher amongst certain student populations, these controls help to ensure that any observed changes are due to actual changes in student behavior rather than changes in the types of students served. For example, a district in a gentrifying area might see a nominal reduction in chronic absenteeism year-over-year that is simply due to having fewer students in poverty.

Despite these controls, the analysis makes a number of assumptions for unobserved data that could impact interpretation of the results. First and foremost, we do not have information on the specific programming implemented by the districts receiving the grants. While they submitted applications including proposals and budgets, we do not know the degree to which programs were implemented with fidelity or that the programming itself would be aligned to the goal of reducing absenteeism. Perhaps more importantly, we also do not have any information on what other districts in the state were doing to combat chronic absenteeism during the period. While these districts did not receive grants specifically to do so, it stands to reason that many would be working to help students attend school more regularly. If districts were making concerted efforts to do so, it might lower the estimated program effect. Finally, this analysis does not take into account longitudinal trends in chronic absenteeism rates, only the difference

between 2016-17 and 2017-18 rates. If grantees and non-grantees differed significantly in the trend of their absenteeism rates (in a way that was not accounted for by changing student populations) it might alter the estimated program effect.

Despite these caveats, our analytical and identification strategy is robust to measurement dynamics (i.e., absolute changes vs. direction of changes) and changing student populations, two of the largest sources of potential bias in this case. By using descriptive, linear regression, and logistic regression approaches, we present a holistic view of program performance. Below, we review these results, which are available in full in the appendix.

Descriptive Results

We begin first by examining the differences in outcomes between the districts that received the grant and those that did not. While this does not take into account any confounding variables such as student characteristics or district size, it examines the question from a difference-in-difference perspective. That is, districts are measured against their own baseline, making across-group comparisons more helpful than if we compared just topline chronic absenteeism rates, for example.

Across all districts receiving the grant, we observe an average change in overall chronic absenteeism rate of -0.26 percentage points, meaning that, on average, LCSS districts saw their overall rates decline - a positive result. This is compared to an average change of 0.57 percentage points for non-recipients; non-grantees saw their attendance problems get worse on average. When breaking results out by grade band, however, the picture gets murkier. Among the grantee districts, only Grades 7-8 saw an average decrease; all other grade levels saw a slight increase. At the same time, all non-grantees saw chronic absenteeism rates increase across all grand bands. To summarize, we observe grantees outperform non-grantees in change in overall rates in Grades 6-8 and 9-12 but underperform in Grades 1-3 and 4-6.

When considering simply whether or not a district experienced a decrease in chronic absenteeism rates from the previous year, we find that across all grade levels and categories, less than half of districts decreased their rates. Comparing grant recipients and non-recipients, results are very similar. The difference in the percentage of districts seeing declines in chronic absenteeism are as little as 3.03 percent (7-8) and no larger than 8.1 percent (4-6). Overall, 30.3 percent of grantee districts saw a decline, compared to 37.7 percent of all other districts.

Regression Results

The linear and logistic regression analyses show similar results to the descriptive analysis. We estimated five grade band models for each linear and logit structure, with grant receipt and student enrollment characteristics as covariates. In none of the models was receiving a LCSS grant significantly predictive of variations in chronic absenteeism (whether measured as change in rate in the linear models or likelihood of decrease in the logit models).

Despite not having statistical significance, the linear series of models have negative coefficients for grant award in the overall, 1-3, 7-8, and 9-12 models, indicating that receiving the grant is associated with a greater decline in chronic absenteeism rates. The magnitude of these coefficients ranges from -0.01 percentage points (1-3) to -1.16 percentage points (7-8), interpreted as the difference in chronic absenteeism rate between grantees and non-grantees when controlling for other factors. It is likely that the sample size of the grantee group makes the model under-powered to detect small changes in rate, even if these differences were not due purely to chance.

Similarly, the logit models, which cover the same grande bands and use the same covariates as the linear models, do not have significant results for the grant award variable. Four of the five logit coefficients are negative, suggesting, in this sample, a negative relationship between grant receipt and decreasing chronic absenteeism rate - which would be a negative result for the program were the results statistically significant.

Conclusion

The results of this study are highly mixed but also have important implications for the LCSS grant program moving forward. While the descriptive and linear regression results indicate that, on average, districts receiving a grant saw greater declines in their chronic absenteeism rates compared to all other districts in California, the logit regression models also show that these same districts were *less* likely, on average, to see their rates decline. Across all models, however, no results were statistically significant, suggesting that results could have been by chance or simply that the study, with just 35 recipient districts, was not powered to detect smaller changes in chronic absenteeism rates.

We recommend that the California Department of Education continue to study the LCSS program as the grant moves into its second and third years and additional cohorts of grantee districts are added. The department should also conduct program implementation reviews with participating districts (and a sample of non-participating districts) to better understand what programs are being implemented and how they may be impacting chronic absenteeism. It, and other states, should also proceed with caution when considering expanding similar programs, given the limited evidence of their efficacy at this point.

Appendix

Logic Model

Learning Communities for School Success (LCSS) Grant Program

Program Vision: *Give local education agencies the resources to implement evidence-based strategies to improve student attendance, engagement, and school climate.*

Population Served: *The program is open to all school districts in the state of California and serves all students in the districts selected to receive the grant. By nature of the programs implemented by local education agencies, the program disproportionately serves at-risk students in these districts.*

Population Needs to be Addressed by Services: *Local education agencies often lack the resources to dedicate specific personnel or programs to address problems of chronic absenteeism, low student engagement, and other educational problems exacerbated by non-academic factors such as poverty, trauma, and low expectations. This grant program aims to ameliorate these problems by providing local education agencies funding to implement evidence-based programs that address them.*

Services	***Resources***	***Desired Outcomes***	***Indicators and Data Sources***
CDE provides funding to districts to implement evidence-based programs that improve student attendance, engagement and school climate.	● CDE funding to districts ($37 million) ● CDE staff to oversee grant applications and administration ● From grant funds, school districts hire staff to oversee and implement local programming ● From grant funds, school districts pay administrative costs of local programming	● Increase student attendance in school ● Increase student achievement in school ● Increase student engagement in school ● Improve school climate ● Increase high school graduation rates ● Increase college-going rates ● Decrease incarceration rates as adults ● Improve local, regional, and national economy	Short-Term ● Chronic absenteeism rate (CDE) ● Smarter Balanced Assessment performance (CDE) ● Stakeholder surveys of school climate (LEA/CDE) Long-Term ● High school graduation rate (CDE) ● College-going rate (National Student Clearinghouse) ● Incarceration rate (state of California) ● Local economic indicators (wages, etc.)

Research Design: *The California Department of Education will monitor the indicators noted in the logic model above to inform evaluation of the program, but a causal evaluation of the program will require a specific research design centered on chronic absenteeism rates - the most direct short-term outcome that the program aims to impact. We will estimate program impact by using a general difference-in-difference framework, which compares one-year changes in chronic absenteeism rates in school districts receiving a grant to the same changes in all other districts in California. Because chronic absenteeism rates are sensitive to changes in student population, the analyses will control for student enrollment characteristics in both years. We will both linear and logistic regression models to evaluate both magnitude and general direction of changes in the chronic absenteeism rate from the year prior to implementation of the grant to the first year of implementation.*

Descriptive Results

Change in Chronic Absenteeism Rates by LCSS Grant Award

Statistic	*N*	*Mean*	*St. Dev.*	*Min*	*Pctl(25)*	*Pctl(75)*	*Max*
Grant Recipients							
Difference (all)	33	-0.264	5.793	-31.2	-0.2	1	6.6
Difference (1-3)	29	0.279	1.717	-3.6	-0.3	0.9	4.9
Difference (4-6)	30	0.747	2.167	-3.5	-0.2	1.425	9.8
Difference (7-8)	30	-0.377	5.287	-26.1	-0.75	1.55	4.6
Difference (9-12)	30	0.26	7.431	-33.8	-0.975	2.775	14.2
% with Decrease (all)	33	0.303	0.467	0	0	1	1
% with Decrease (1-3)	29	0.379	0.494	0	0	1	1
% with Decrease (4-6)	30	0.3	0.466	0	0	1	1
% with Decrease (7-8)	30	0.367	0.49	0	0	1	1
% with Decrease (9-12)	30	0.433	0.504	0	0	1	1
Non-Recipients							
Difference (all)	685	0.568	3.514	-14	-0.5	1.2	41.4
Difference (1-3)	620	0.185	3.099	-15.1	-0.9	1.1	23.8
Difference (4-6)	627	0.314	3.062	-22.4	-0.6	1.15	23.7
Difference (7-8)	610	0.572	3.828	-19	-0.8	1.7	29.6
Difference (9-12)	446	0.926	5.89	-36.7	-0.8	2.1	51.2
% with Decrease (all)	685	0.377	0.485	0	0	1	1
% with Decrease (1-3)	620	0.458	0.499	0	0	1	1
% with Decrease (4-6)	627	0.381	0.486	0	0	1	1
% with Decrease (7-8)	610	0.4	0.49	0	0	1	1
% with Decrease (9-12)	446	0.388	0.488	0	0	1	1

Regression Results

The tables below present the results of (1) linear regression and (2) logistic regression models by grade band. The coefficient of interest is "Grant Award" while other variables serve as controls.

Impact of Grant Award on Year-Over-Year Change in Chronic Absenteeism Rates

	Dependent variable:				
	Overall	Grades 1-3	Grades 4-6	Grades 7-8	Grades 9-12
	(1)	(2)	(3)	(4)	(5)
Grant Award	-1.029 (0.660)	-0.013 (0.615)	0.300 (0.597)	-1.159 (0.769)	-0.755 (1.116)
2018 Enrollment	0.00002 (0.0002)	-0.0003 (0.0002)	-0.0002 (0.0002)	-0.0001 (0.0003)	0.0003 (0.0004)
2017 Enrollment	-0.00002 (0.0002)	0.0002 (0.0002)	0.0002 (0.0002)	0.0001 (0.0003)	-0.0003 (0.0004)
% Black (2018)	78.862*** (19.654)	21.156 (17.498)	20.863 (17.279)	77.556*** (22.279)	61.136* (32.995)
% Black (2017)	-72.939*** (19.234)	-21.571 (17.110)	-18.306 (16.904)	-67.221*** (21.827)	-64.019** (32.331)
% Hispanic (2018)	-21.492*** (3.862)	-8.796** (3.583)	-1.949 (3.514)	-14.232*** (4.450)	-27.687*** (6.677)
% Hispanic (2017)	18.161*** (3.775)	8.573** (3.500)	2.769 (3.431)	12.149*** (4.370)	14.389** (6.409)
% Asian (2018)	26.395 (16.184)	18.476 (14.548)	3.118 (14.310)	11.158 (18.401)	0.337 (28.482)
% Asian (2017)	-31.113* (16.116)	-18.981 (14.501)	-2.772 (14.264)	-12.614 (18.328)	-16.634 (28.029)
% White (2018)	-1.352 (3.873)	-0.778 (3.519)	-2.318 (3.475)	-2.252 (4.489)	2.489 (6.576)
% White (2017)	-3.033 (3.935)	-0.652 (3.565)	2.152 (3.520)	0.469 (4.552)	-16.045** (6.949)
Constant	3.703*** (0.796)	0.862 (0.722)	-0.028 (0.707)	1.961** (0.901)	12.223*** (1.835)
Observations	688	619	627	610	465
R^2	0.085	0.021	0.011	0.048	0.113
Adjusted R^2	0.070	0.003	-0.006	0.030	0.092
Note:					*p<0.1; **p<0.05; ***p<0.01

Impact of Grant Award on Decrease in Chronic Absenteeism Rates

	Dependent variable:				
	Overall	Grades 1-3	Grades 4-6	Grades 7-8	Grades 9-12
	(1)	(2)	(3)	(4)	(5)
Grant Award	-0.056 (0.090)	-0.090 (0.101)	-0.002 (0.095)	-0.015 (0.097)	0.043 (0.096)
2018 Enrollment	-0.0001 (0.00003)	0.00003 (0.00004)	0.00003 (0.00003)	0.00003 (0.00003)	-0.0001* (0.00003)
2017 Enrollment	0.0001 (0.00003)	-0.00003 (0.00003)	-0.00003 (0.00003)	-0.00003 (0.00003)	0.0001* (0.00003)
% Black (2018)	-0.244 (2.689)	-3.457 (2.861)	-4.746* (2.759)	-2.422 (2.801)	2.673 (2.852)
% Black (2017)	-0.254 (2.631)	3.036 (2.798)	3.577 (2.699)	1.586 (2.744)	-2.291 (2.794)
% Hispanic (2018)	0.265 (0.528)	0.882 (0.586)	0.031 (0.561)	0.147 (0.559)	0.769 (0.577)
% Hispanic (2017)	-0.072 (0.516)	-0.890 (0.572)	-0.221 (0.548)	-0.216 (0.549)	-0.173 (0.554)
% Asian (2018)	-2.881 (2.214)	-3.549 (2.379)	-3.049 (2.285)	0.749 (2.313)	-2.760 (2.462)
% Asian (2017)	2.796 (2.205)	3.301 (2.371)	2.680 (2.278)	-1.052 (2.304)	3.314 (2.423)
% White (2018)	-0.079 (0.530)	0.229 (0.575)	0.987* (0.555)	0.275 (0.564)	-0.630 (0.568)
% White (2017)	0.291 (0.538)	-0.111 (0.583)	-1.018* (0.562)	-0.298 (0.572)	1.204** (0.601)
Constant	0.253** (0.109)	0.440*** (0.118)	0.539*** (0.113)	0.465*** (0.113)	-0.085 (0.159)
Observations	688	619	627	610	465
Note:					*p<0.1; **p<0.05; ***p<0.01