Evaluation of the Early Literacy Support Block Grant

Study Information

Hypotheses

Our singular confirmatory hypothesis is that the schools identified for treatment by the Early Literacy Support Block Grant (ELSBG) will have improved literacy outcomes in the first full school year following the grant's dispersal and implementation. Other secondary hypotheses will focus on the impact of the ELSBG on several other outcomes described below.

Design Plan

Study type

Observational Study - Data is collected from study subjects that are not randomly assigned to a treatment. This includes surveys, "natural experiments," and regression discontinuity designs.

Blinding

No blinding is involved in this study.

Is there any additional blinding in this study?

No response

Study design

We begin by identifying schools eligible for the Early Literacy Support Block Grant (ELSBG). To target the grant, the California Department of Education (CDE) used a weighted average of 2018 and 2019 English Language Arts test scores to find the elementary schools with the highest percentage of students scoring Level 1 (Standard Not Met). We use publicly available data from the Smarter Balanced Assessments Consortium (SBAC) to replicate this work and identify the same 75 schools. Because one of the 75 schools closed before the grant could be dispersed, CDE offered the grant to the 76th school and we include that school in our intent to treat sample.

Among schools close to the treatment-eligibility threshold, their intent to treat is quite likely to be conditionally random. Therefore, we propose to implement a regression discontinuity design that effectively compares outcomes of the schools eligible for the grant and schools nearby the threshold that were not eligible for the grant. Full implementation of school-specific Literacy Action Plans began in July 2021 so we focus on the outcome domain of 3rd grade ELA SBAC scores for SY 2021-22 and the specific measure of percent of students scoring at a Level 1. This will be highly correlated with mean scaled score, which we will use as a secondary outcome in that same domain. Because schools were notified of their eligibility for the grant in August 2020 and began receiving assistance from the Expert Lead on Literacy during the 2020-21 school year, we would also like to use that first year of outcomes in an exploratory fashion. We also plan to explore 4th grade ELA test scores, chronic absenteeism, and school suspensions as additional, non-confirmatory outcomes.

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Randomization

Existing Data

Registration prior to creation of data

Explanation of existing data

We rely on publicly available data from the California Assessment of Student Performance and Progress (https://caaspp-elpac.cde.ca.gov/caaspp/) for all years in the study period, before and after treatment. Test scores for SY 2021-22 (our main outcome) are not yet available at the time of pre-registration and thus have not been examined.

Data collection procedures

We have already downloaded data from SY 2017-18 and SY 2018-19 (pre-treatment time frame) from the CAASPP website and plan to download outcome data from the CAASPP website when it becomes available in summer/fall 2022. At the time of this pre-registration, the outcome data are not available.

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Sample size

Our full sample consists of 5,712 elementary schools in California during both SY 2017-18 and SY 2018-19. When data is available for SY 2021-22, this sample size will change slightly as we need a school to be open and reporting scores for at least 11 students in the examined grade level for all four years (2017-2022) for it to be included in our final sample.

Sample size rationale

This sample includes all schools who reported a score for at least 11 third graders in all four years and who are designated as Traditional in California's school data system (only traditional schools are eligible for the grant – this includes charter schools and public district schools but excludes schools only offering special education programming).

Stopping rule

No response

Variables

Manipulated variables

No response

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Measured variables

Running variable: weighted average of ELA test scores for 3rd graders in 2018 and 2019. This is calculated using the California Department of Education formula as follows:
N1 = Number of students scoring level 1 in 2018
%1 = % of students scoring level 1 in 2018
N2 = Number of students scoring level 1 in 2019
%2 = % of students scoring level 1 in 2019
Formula = ((N1 x %1) + (N2 x %2))/(N1 + N2)

Primary outcome variable: percent of 3rd graders not meeting standards (i.e., scoring at Level 1) on the SY 2021-22 SBAC ELA state assessment.

Exploratory outcomes: mean scaled score of 3rd graders in SY 2021-22 on SBAC ELA, mean scaled score of 4th graders in SY 2021-22 on SBAC ELA, percent of 4th graders scoring Level 1 in SY 2021-22 on SBAC ELA, chronic absenteeism, suspensions, mean scaled score of 3rd graders on SBAC math, percent of 3rd graders scoring Level 1 in SY 2021-22 on SBAC math

Covariates: demographic variables for student population (percent English Learners, percent students with disabilities, percent socioeconomically disadvantaged, percent White, etc.)

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Analysis Plan

Statistical models

For this study, we utilize a regression discontinuity design, comparing the performance on a 3rd grade literacy test between schools on either side of the ELSBG-eligibility threshold. Our analytical plan will closely track the five standards detailed in the Institute of Education Science's (IES) guidance (WWC, 2020) on regression-discontinuity designs (i.e., integrity of the forcing variable, attrition, continuity of the relationship between the outcome and the forcing variable, functional form and bandwidth, and fuzzy RD): What Works Clearinghouse. (2020). What Works Clearinghouse Standards Handbook, Version 4.1. Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance: https://ies.ed.gov/ncee/wwc/handbooks, pages 56-76

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Transformations

No response

Inference criteria

No response

Data exclusion

No response

Missing data

No response

Exploratory analysis

No response

Other

Other

No response