Pandemic Learning Loss in California's School Districts:

A Critical Examination of Local Control Funding and Accountability Plans

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Background

- Early version of this work presented last year
  - Comments before *National Tax Journal* Submission
- Sections
  - Property Taxation & School Finance in CA
  - CA's *Local Control Funding Formula* (LCFF)
  - Per-Student Spending and Student Academic Outcomes
 - Pandemic Learning Loss and LCFF Funding
  - Conclusion

Property Taxation & School Finance in CA

- Before 1978 (Prop 13 start) - state-guaranteed base per pupil supplemented with local property taxes
  - 60% local property tax, 30% state general fund
- 1978 - 2013 (LCFF start) - 50 categorical programs, student attendance, and historical funding patterns from local property taxes
  - 30% local property tax, 60% state general fund
  - TIF eliminated in 2012 due to state backfill
- 2012 CA ranked last nationwide in average per-pupil spending adjusted for cost of living
  - National Assessment of Educ Progress (NAEP) tests exhibited significant achievement gaps by SES and Race & Ethnicity

Per Pupil K–12 Education Spending, 2002–18

Inflation adjusted to 2018 dollars

2013 – LCFF Start
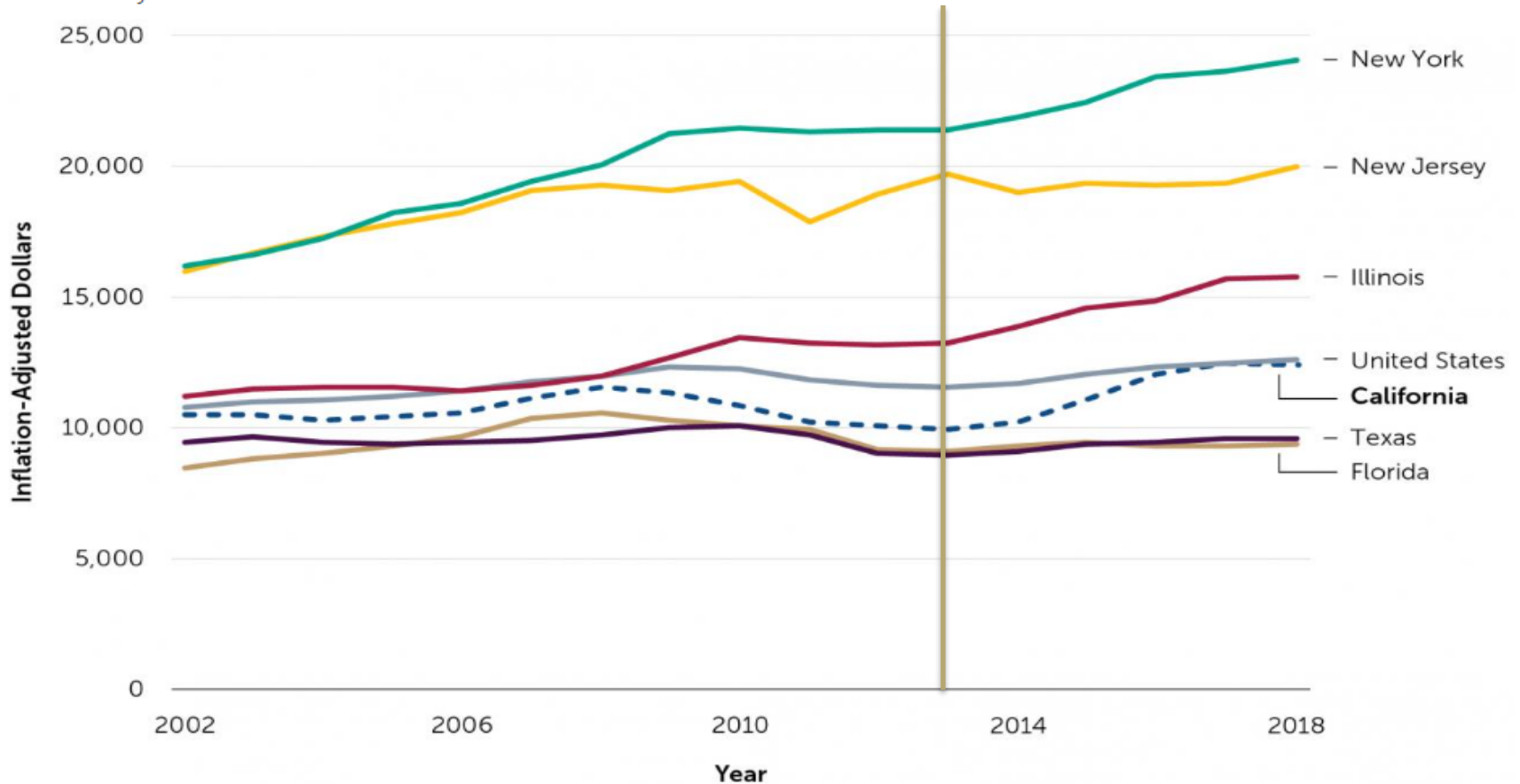
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CA's current Local Control Funding Formula (LCFF)

- 2013 commitment to increase state funding for K-12 education by one-third over the next five years
  - Incrementally phased-in
  - Goal: Reduce achievement gaps by SES (Race & Ethnicity*)
- New state per-student district funding formula (COLA)
  - (1) Base grant rises by grade level (~$8K 2018 – LCFF fully funded)
  - (2) Supplemental grant ($1.6K 2018 per high-need** student)
  - (3) Concentration grant ($5.3K 2018 per high-need student if district > 55% high need)
    - *CA's Constitution (Prop 209 and 16) prohibits the targeting of public dollars by race/ethnicity
    - **High-need defined as either English Learner, 150% percent or less of household poverty income, or foster youth (nonduplicative);

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Figure 2
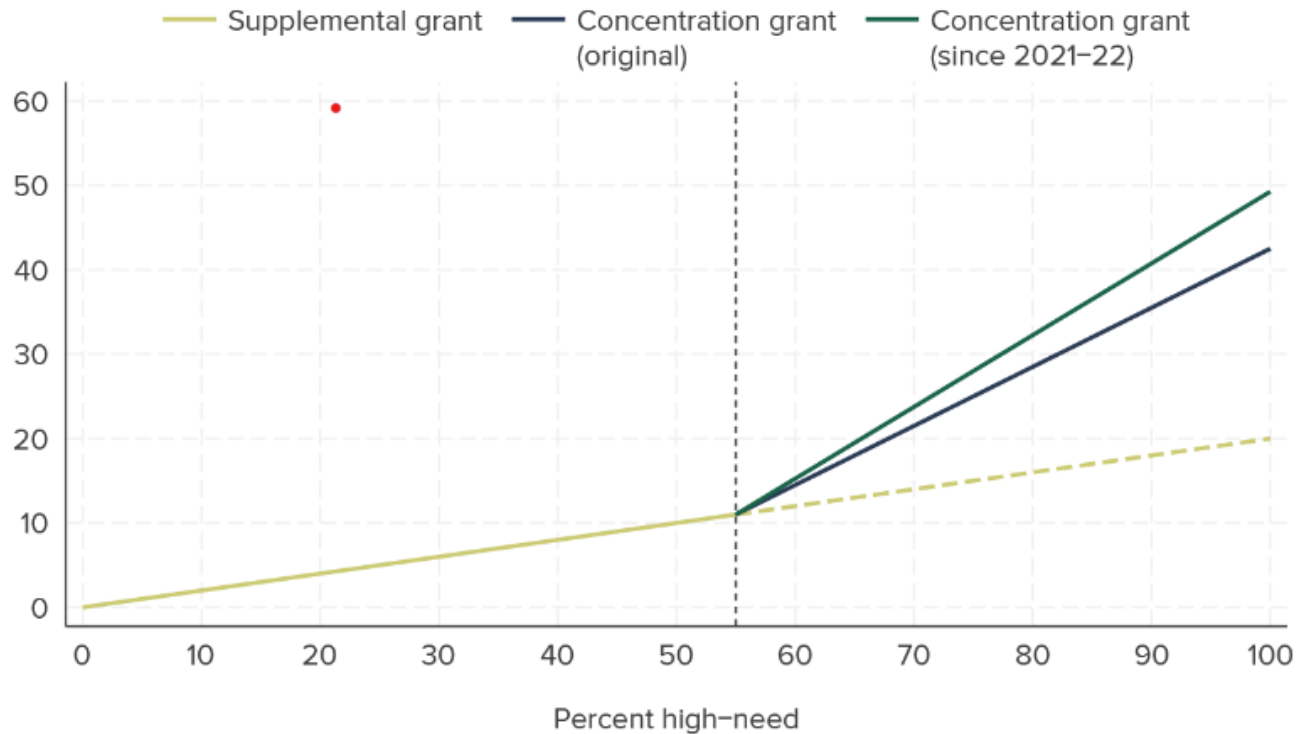## Funding Formula Amounts Before (2012) and During (2013–2018) the Rollout of LCFF
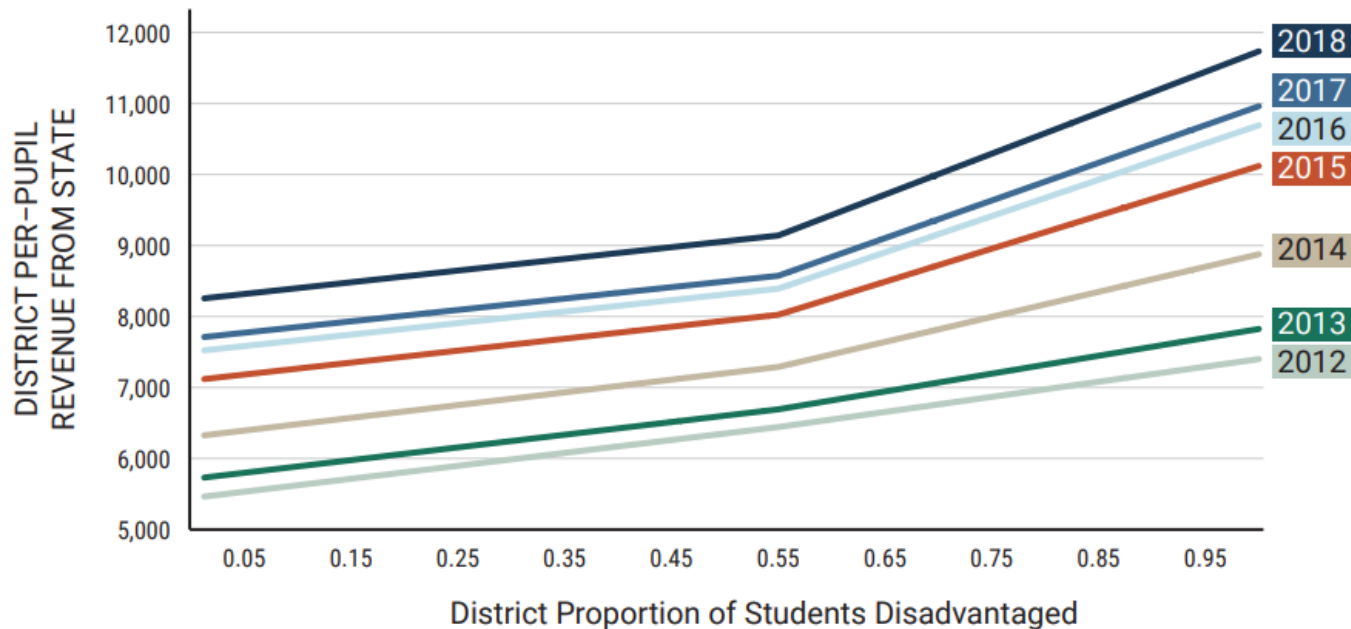
Notes: Figure 2 was constructed by computing per-pupil revenues for each school district in each year based on the funding formula and its elements before and after LCFF-induced formula changes. This figure excludes Basic Aid districts, which are not subject to the LCFF funding formula, as discussed later in the text. Total per-pupil revenue from the state is defined as the total revenue from all state sources, divided by enrollment and adjusted for inflation to represent 2015 dollars. Pre-LCFF is 2012, and post-LCFF is 2013–2018.

Source: Author analysis of data from the California Department of Education for 2012 through 2018–19 in the Standardized Account Code Structure.

https://learningpolicyinstitute.org/media/4108/download?file=CA_LCFF_School_Funding_Effectiveness_REPORT.pdf&inline

Figure 1

Funding formula directs additional funding on top of base funding as a district's high-need share increases

Percentage increase in funding
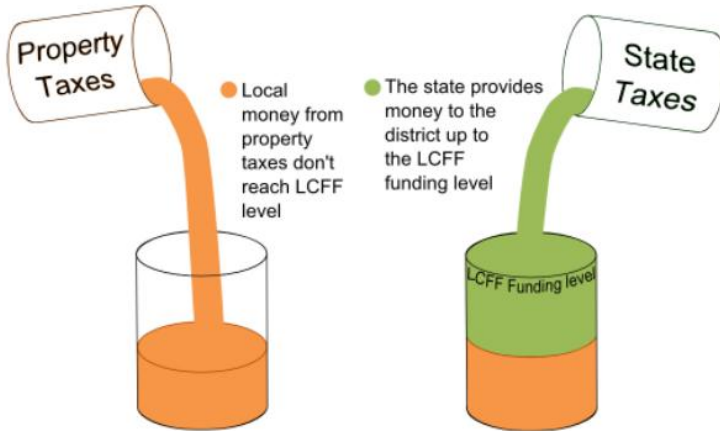
Legend: Supplemental grant — Concentration grant (original) — Concentration grant (since 2021–22)

X-axis: Percent high-need

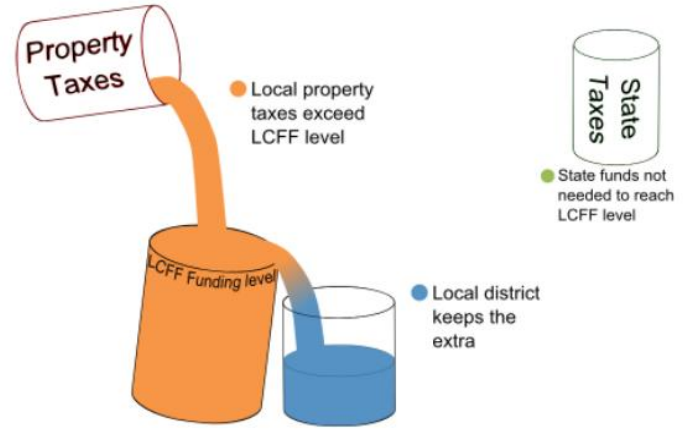**SOURCE:** California Department of Education.

NOTE: High-need represents the "unduplicated pupil percentage" of low-income, English Learner, and/or foster youth in a district; the figure shows the percent increase in base grant funding for a district with a given share of high-need students.

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https://www.ppic.org/publication/examining-the-reach-of-targeted-school-funding/

District Funding Under LCFF =

Property Taxes

- Local money from property taxes don't reach LCFF level

- The state provides money to the district up to the LCFF funding level

State Taxes

LCFF Funding level

The first step in filling a district's LCFF bucket is to pour in all the local property taxes. If those taxes fill the bucket halfway, state money is used to fill the other half of the bucket. If property taxes fill the bucket two-thirds of the way, state money fills the other third.
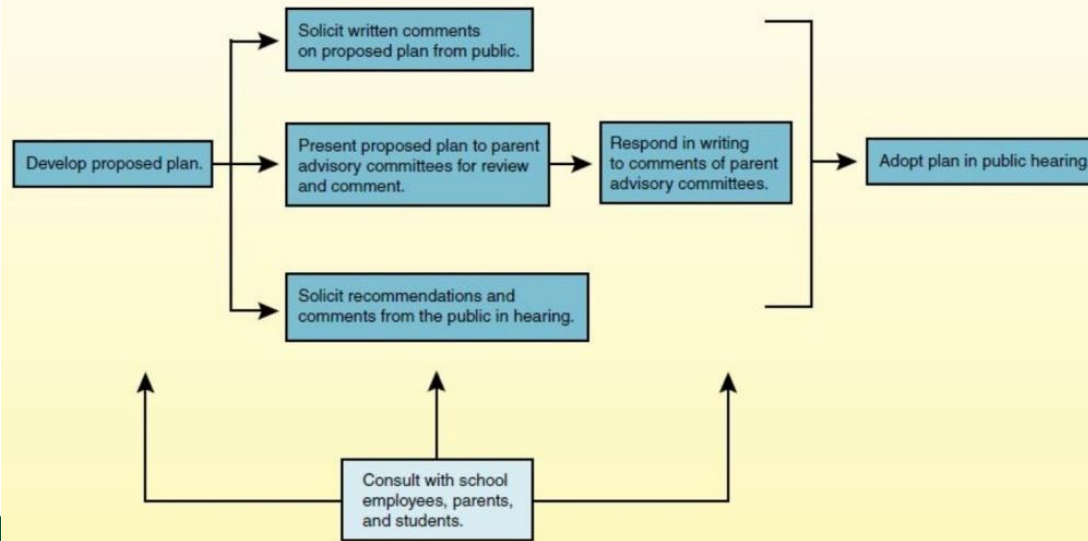
"Basic Aid" District Funding

Property Taxes

- Local property taxes exceed LCFF level

State Taxes

- State funds not needed to reach LCFF level

LCFF Funding level

- Local district keeps the extra

In perhaps as many as 100 school districts in California, the property taxes will fill or overflow the LCFF Funding Bucket. In those cases, the districts keep all their property taxes and get no LCFF money from the state. These are known as *Basic Aid* or *Excess Tax* districts.

School District LCAP Adoption Process

Develop proposed plan.

Solicit written comments on proposed plan from public.

Present proposed plan to parent advisory committees for review and comment.

Respond in writing to comments of parent advisory committees.

Adopt plan in public hearing.

Solicit recommendations and comments from the public in hearing.

Consult with school employees, parents, and students.
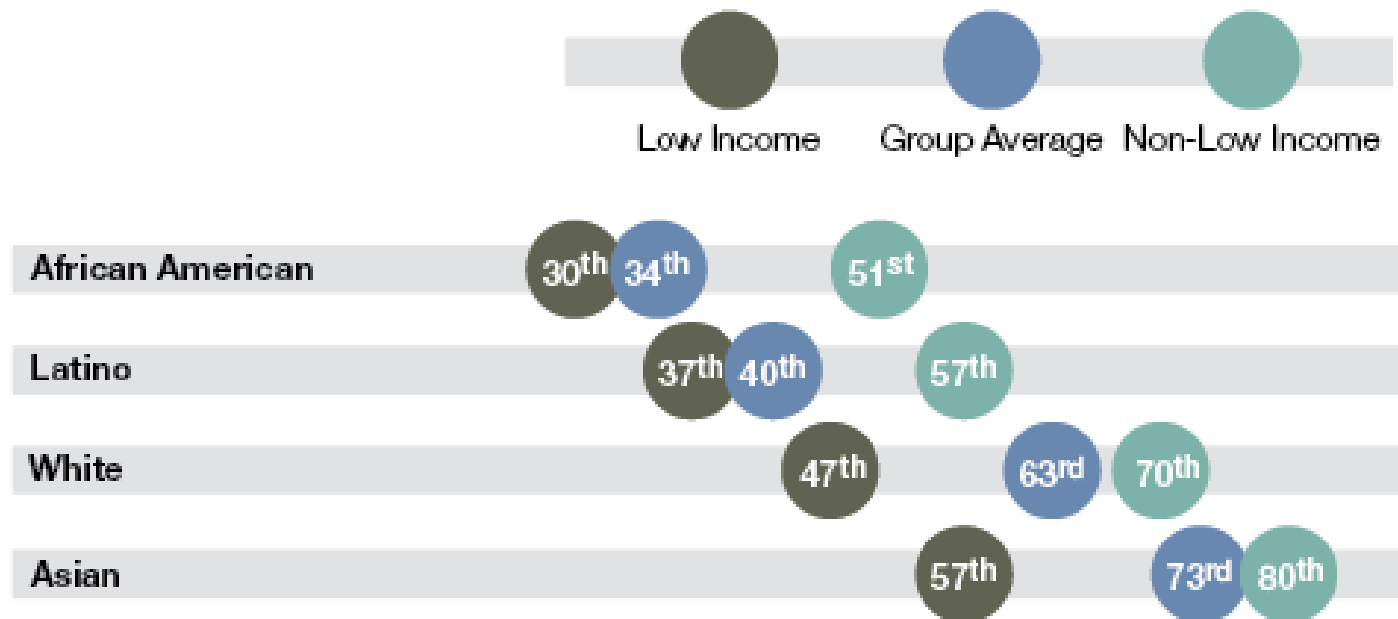
LCAP = Local Control and Accountability Plan.

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Figure 3

Achievement Gaps Exist by Race/Ethnicity and Income

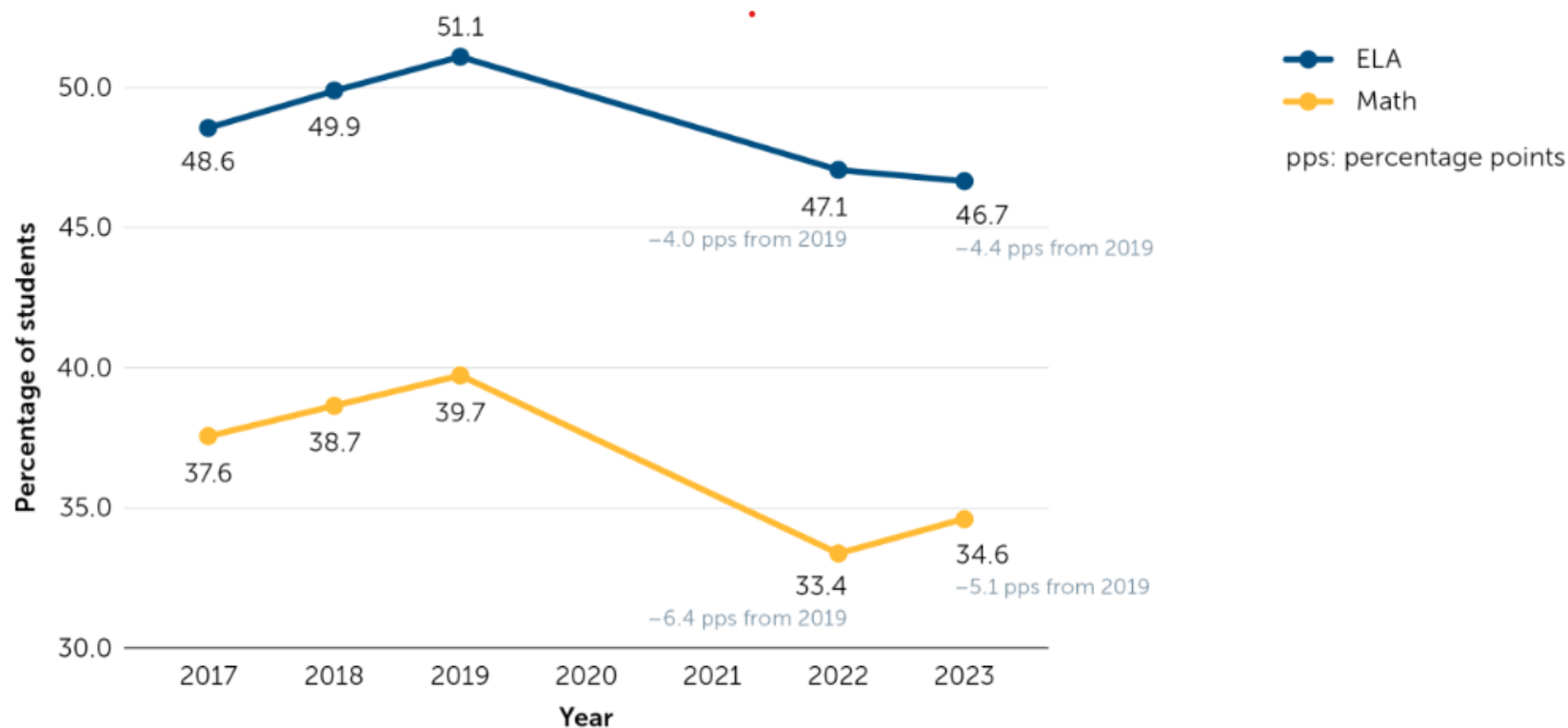Average Percentile Rank of Group on State Tests, Spring 2018

Low Income   Group Average   Non-Low Income

African American — 30th, 34th, 51st

Latino — 37th, 40th, 57th

White — 47th, 63rd, 70th

Asian — 57th, 73rd, 80th

LAO

https://lao.ca.gov/Publications/Report/4144

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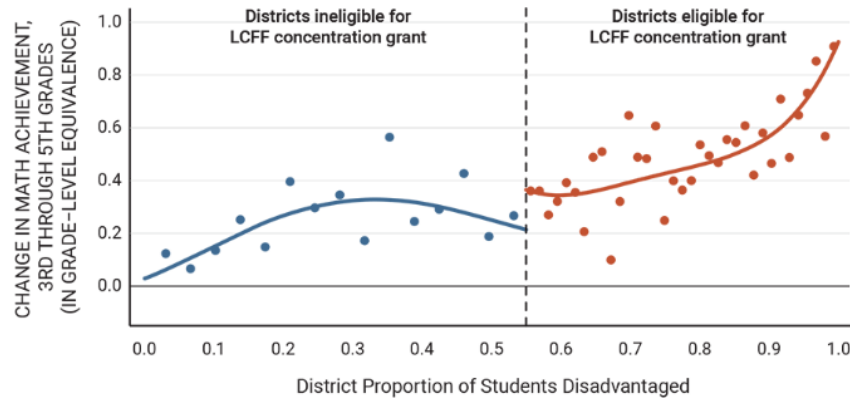**Figure 1.** Percentage of Students Meeting or Exceeding Standards in ELA and Math by Year (All Grades)

https://edpolicyinca.org/publications/california-test-scores-show-little-improvement-after-pandemic

LCFF Funding and Student Std Test Outcomes

- Consensus
  - Per-student spending "does matter" to K-12 as long directed toward activities shown to influence academic outcomes
- California not first state to transition from categorical aid (based more on specific school activities) to weighted formula aid (based more on student categories)
  - Texas (1984), Massachusetts (1993), New Jersey (2008), and Washington (2017)
  - More resources to students with greater educational needs through funding bumps to specific categories of students (Economically Disadvantaged and English Language Learner)
  - No state grants district aid based on a student's race or ethnicity, but only California law prohibits such
  - Mixed evidence exists on the efficacy of this method of state aid in achieving goal of improving targeted student outcomes
    - (Congressional Research Service, 2019; Levin et al., 2019 & Edunomics Lab, 2020).

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- Two Previous Studies
  - Johnson, 2023, School Funding Effectiveness: Evidence from CA's LCFF, Learning Policy Institute
    - Pre-Pandemic (2014 to 2018), Math Achievement Change
  - Lafortune, Herrera, and Gao, 2023, Examining the Reach of Targeted School Funding, Public Policy Institute of California
    - Pre & Post-Pandemic (2021-22), Math & ELA Share Meeting Standard

Figure 2: Increase in Math Achievement From 2014 (Before) to 2018 (After) LCFF, Grades 3 Through 5

Districts ineligible for LCFF concentration grant

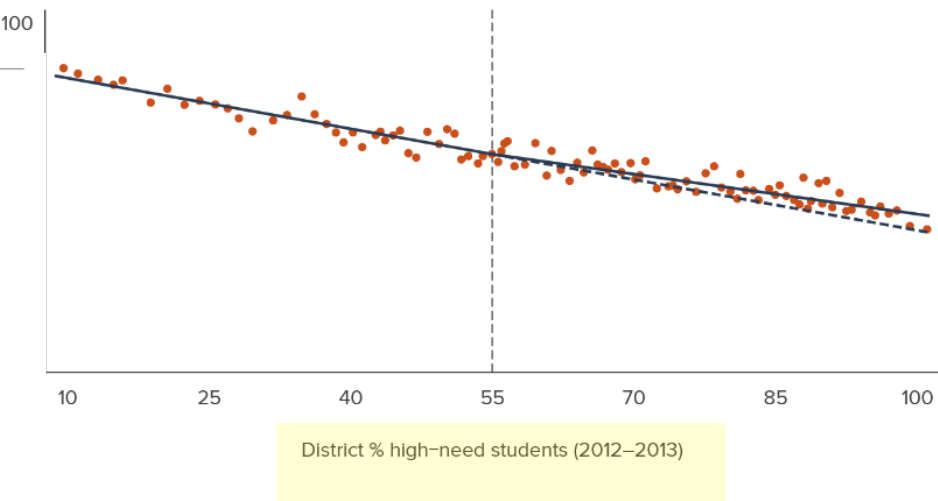Districts eligible for LCFF concentration grant

Note: Lines represent the change in math achievement between 2014 and 2018.

Sources: Author analysis of from the California Department of Education for 2014–2018 in the Standardized Account Code Structure and California Longitudinal Pupil Achievement Data System.
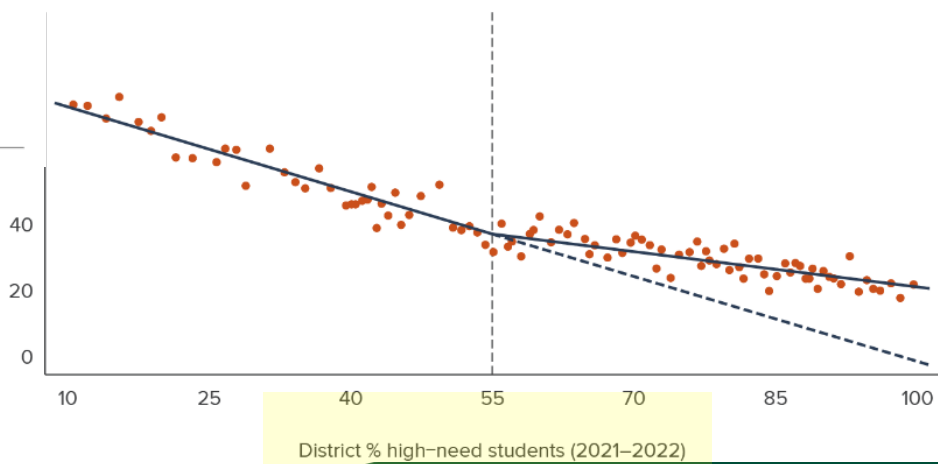
Regression Kink Discontinuity Models

Figure 3

Concentration grants appear to improve test scores in high-need districts above the 55 percent threshold

Share meeting/exceeding standards before LCFF (%)

District % high–need students (2012–2013)

re meeting/excceeding standards after LCFF (%)

District % high–need students (2021–2022)

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Pandemic Learning Loss and LCFF Funding

- Data

 - Stanford Education Data Archive 2022

    - 2019 to 2022 District Average Change in 8th Grade less 4th Grade (National Assessment of Education Progress) NAEP Math Score in Grade Equivalency

      - 4to8DGLCMP = [(District Grade Level Achievement Math Proficiency (DGLCMP) 4thGrade – DGCLMP 3rd Grade) + (DGLCMP 5th Grade – DGLCMP 4th Grade) + (DGLCMP 6th Grade – DGLCMP 5th Grade) + (DGLCMP 7th Grade – DGLCMP 6th Grade) + (DGLCMP8th Grade – DGLCMP 7th Grade)] / 5

    - Restrictions (524 Observations from 1,108)

  - California Statewide LCFF Summary Data 2018-19

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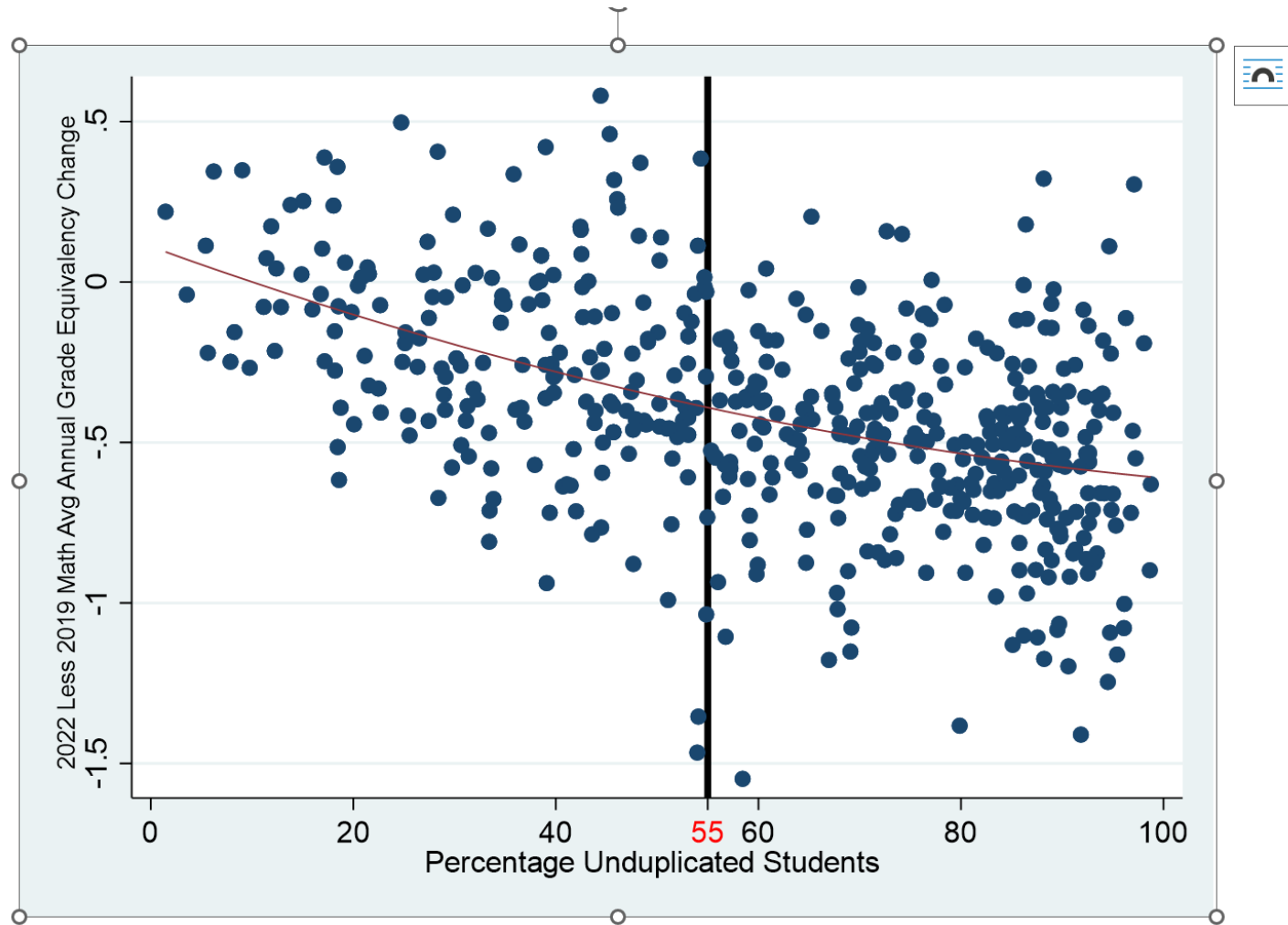
Figure 2: Simple Quadratic Plot of Pandemic (2019 to 2022) 4th to 8th Grade Annual Learning Loss (4to8DGLCMPA) against 2019 Percentage Unduplicated Students
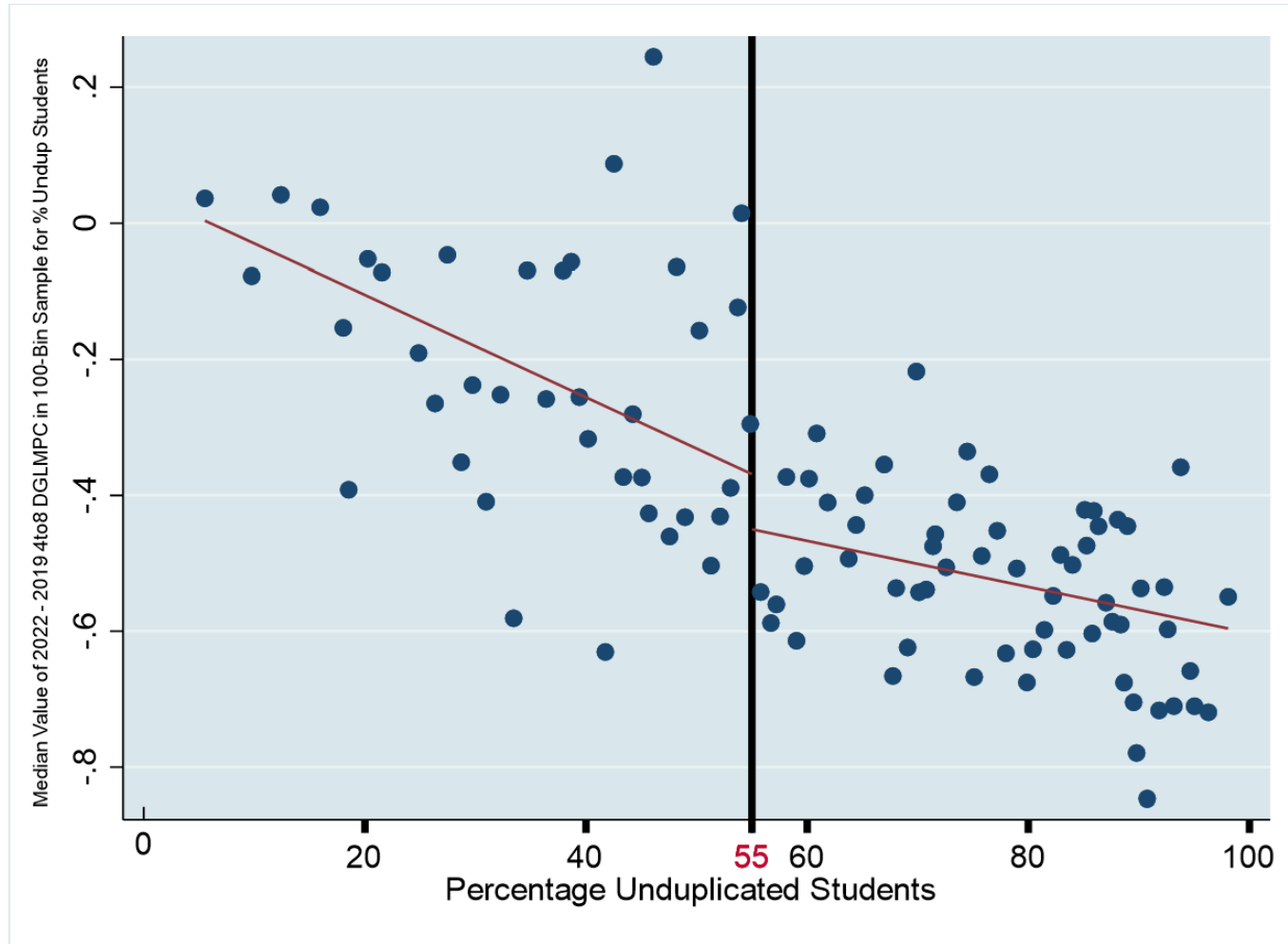
Figure 3: Simple Kinked Plot of Pandemic (2019 to 2022) 4th to 8th Grade Annual Learning Loss (Median 100-Bin 3to8DGLCMPA) against 2019 Percentage Unduplicated Students

Table 2: Regression Discontinuity Analysis of the Influence of Additional Per-Pupil State Funds on 4to8DGLCMP if District's Unduplicated Students Greater than 55%^

Student Sample / Variable Name	All	Economic Disadvantaged	Not Economic Disadvantaged	Latino	Black
Decimal % Unduplicated Students	-1.265*** (0.208)	-0.961*** (0.259)	-1.126*** (0.216)	-1.051*** (0.250)	-1.141* (0.693)
Decimal % Unduplicated Students ≥ 0.55	0.722*** (0.227)	0.585* (0.306)	0.251 (0.330)	0.627** (0.281)	0.380 (0.920)
2019 8th to 3rd Grade Annual Average 3to8DGLCMP^^	-0.116*** (0.022)	-0.115*** (0.028)	-0.103*** (0.034)	-0.114*** (0.023)	-0.107** (0.053)
Decimal % Household Unemployed	-1.931*** (0.704)	-1.979*** (0.728)	-3.516*** (1.170)	-1.947*** (0.700)	-0.245 (2.359)
Decimal % Latino/a Students	-0.140 (0.107)	0.121 ().145)	0.098 (0.145)	-0.029 (0.143)	0.646 (0.406)
Decimal % Black Students	-0.459* (0.261)	0.432 (0.298)	0.439 (0.422)	-0.106 (0.244)	-0.141 (0.840)
Decimal % Asian-American Students	0.656*** (0.132)	0.348** (0.159)	0.814*** (0.167)	-0.001 (0.138)	0.942 (0.591)
Decimal % Native American Students	1.188 (0.950)	1.572 (1.448)	2.336* (1.287)	2.242 (2.009)	-9.756* (5.858)
Decimal % Special Education Students	-1.394** (0.590)	-1.037 (0.735)	-1.303 (0.887)	-1.115* (0.660)	5.644 (3.581)
Decimal % Students in Urban Local Schools	-0.061* (0.034)	-0.092** (0.044)	-0.052 (0.056)	-0.077** (0.037)	-0.063 (0.095)
Total Enrollment (10K)	0.015*** (0.004)	0.011*** (0.003)	0.019*** (0.005)	0.011*** (0.003)	0.004 (0.005)
Enrollment/Race Composition Change Dummy	-0.089** (0.038)	omitted	-0.059 (0.047)	-0.113** (0.045)	-0.065 (0.110)
Constant	-0.154 (0.122)	-0.259* (0.148)	-0.203 (0.160)	-0.292* (0.157)	-1.768*** (0.574)
R-Squared	0.317	0.250	0.307	0.231	229
Observations	512	361	369	406	71

^Estimated in Stata using robust standard errors for heteroskedasticity. Asterisks indicate the degree of statistical significance in a two-tailed test with *** > 99% confidence, ** = 95 to 99% confidence, and * = 90 to < 95% confidence.

^^ Calculated for the same student group as the dependent variable.

Conclusion

- Greater unduplicated students in a district increased average math learning loss for ALL students during the Pandemic
    - Mixed results on efficacy of CA's LCFF and LCAP Reform
        - Evidence that LCFF concentration grants work to reduce learning loss by about 40% for student samples of All, Econ Disadvantaged, & Latina
        - No evidence that LCFF concentration grants work to reduce learning loss for student samples of Not Econ Disadvantaged & Black

Table 3: Unduplicated Students' Effect on 4to8DGLCMP as Compared to Effect Change After Unduplicated Students Exceed 55%

Student Sample	All	Economic Disadvantaged	Not Economic Disadvantaged	Latino	Black
Decimal % Unduplicated Students Effect	-1.265	-0.961	-1.126	-1.051	-1.141
Difference Decimal % Unduplicated Students Effect ≥ 55%	0.543	0.376	none	0.424	none
Difference Decimal % Unduplicated Students Effect > 55% / Decimal % Unduplicated Students Effect	42.9%	39.1%	none	40.3%	none

- Policy Concerns
  - Black students behind 2.2 grades pre-pandemic and 2.8 grades post-pandemic
    - Well-recognized occurrence that has gotten worse
  - 2002 CA Reparations for Black Slavery Task Force recommends
    - A greater focus of CA policy to right the wrongs of past injustices
    - Prop 209 in CA prohibits a specific weight given in LCFF formula for Black student
      - Instead, a demonstration project regarding an Equity Multiplier of about $900 additional for students
        - » School site based (not district)
        - » Meeting one of the following: (1) both parents, not HS graduates, eligible for free or reduced-price student lunch, homeless, foster child, enrolled in juvenile court school, or eligible for Title I Part C Migrant Program
        - » LCAP written specifically for site and targeted improvements
        - » Annual reports and dashboard
        - » Only expected to target about 10% of CA Black Students
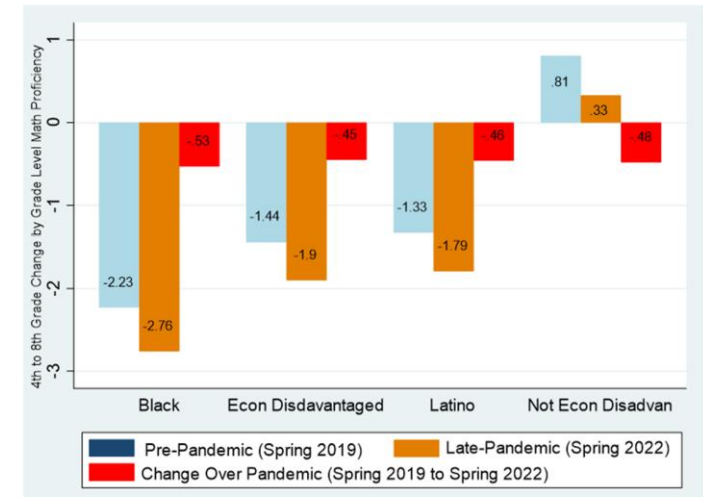

Figure 4: Comparison of Average Annual Learning Loss for Pre and Late Pandemic Grade-Level Equivalent Math Proficiency