

School Funding and ACT/SAT Scores in California

How effective are government funding programs in assisting lower-income students prepare for college?

Type of Data Used

California Department of Education

- Average SAT and ACT scores by district

<https://www.cde.ca.gov/ds/sp/ai/>

- School Financial Data

<https://www.cde.ca.gov/ds/fd/fd/>

- Free & Reduced Meal Program Data

<https://www.cde.ca.gov/ds/sd/sd/filessp.asp>

Variables

Daily_expenditure is the average fund allocated per day in a district.

- To calculate daily_expenditure, you take the total funds for a school year and divide by the total ADA (average daily attendance)
 - Average daily attendance is the the total days of attendance for a student divided by the total total days of instruction
 - Total funds:
 - Salaries
 - Employee Benefits
 - Books and Supplies
 - Equipment Replacement
 - Services and Indirect Costs

Success Variables

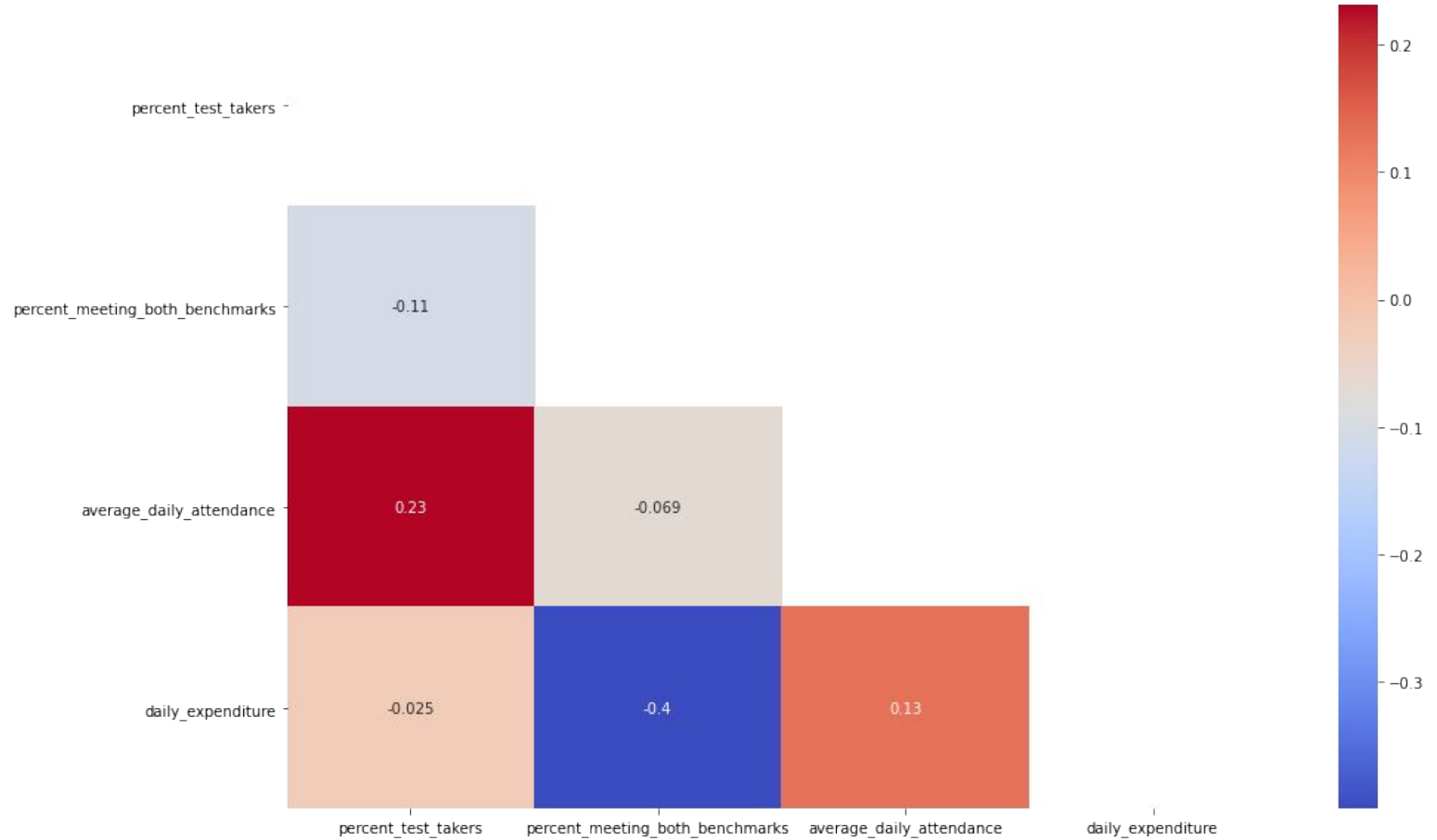
SAT:

- Percentage of test takers who successful met the benchmarks for both the math and evidence-based reading & writing (ERW) portions
- Benchmarks set by the CollegeBoard:
 - Math Benchmark 530
 - ERW Benchmark 480

ACT:

- Percentage of test takers who averaged 21 or above on the ACT

SAT Correlation



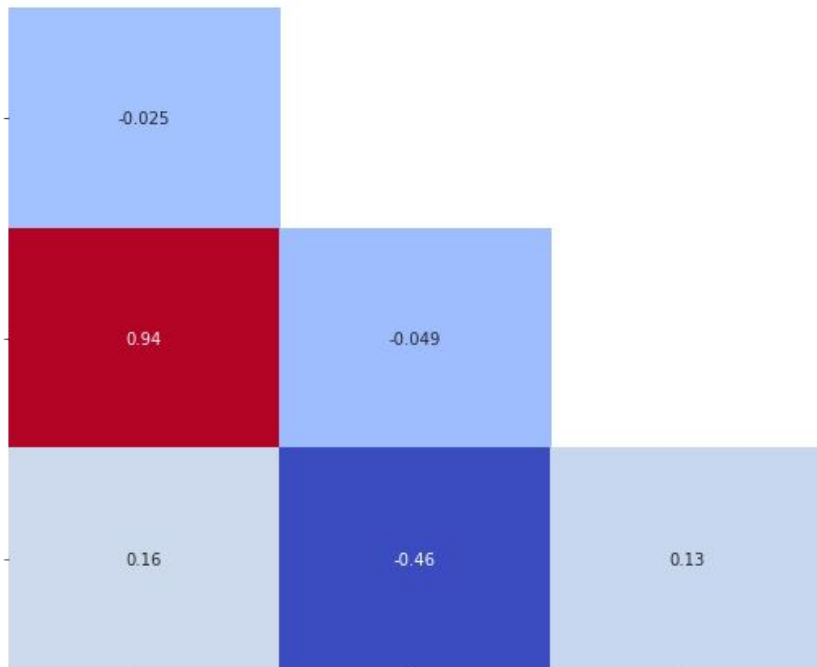
ACT Correlation

12th_number_of_test_takers -

%_scores_greater>=21

average_daily_attendance

daily_expenditure



12th_number_of_test_takers

%_scores_greater>=21

average_daily_attendance

daily_expenditure

0.8

0.6

0.4

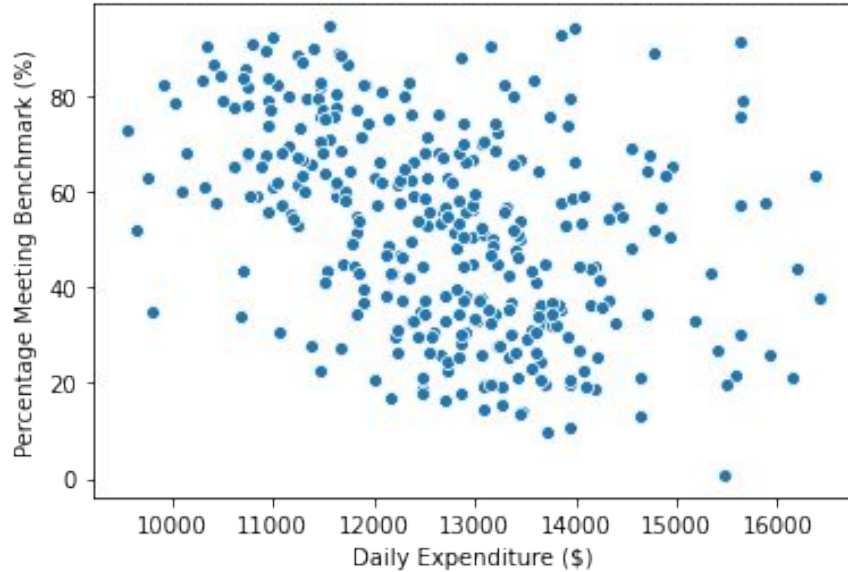
0.2

0.0

-0.2

-0.4

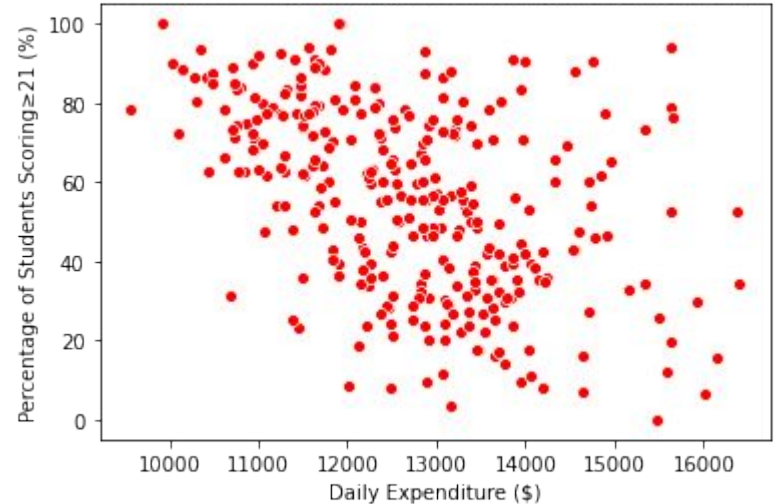
Students Meeting SAT Benchmarks vs Daily Expenditure



- Mean Daily Expenditure:
 - \$12,690
- Min:
 - \$9,560
- Max:
 - \$16,405

In both charts you can see that as the daily expenditure increases, the success rate of students decreases.

Percentage of ACT Testtakers Scoring 21 or Above vs Daily Expenditure



Title I

Title I, Part A is a federal aid program for school districts serving low-income families.

- The idea behind this program is to close the education gap between low-income students and the rest of their peers by increasing funding for lower income districts
- We will look at the percentage of students eligible for the Free or Reduced Price Meals (FRPM) in a district as a measure of low-income areas
- Federal Funding accounts for roughly 8% of the total funding

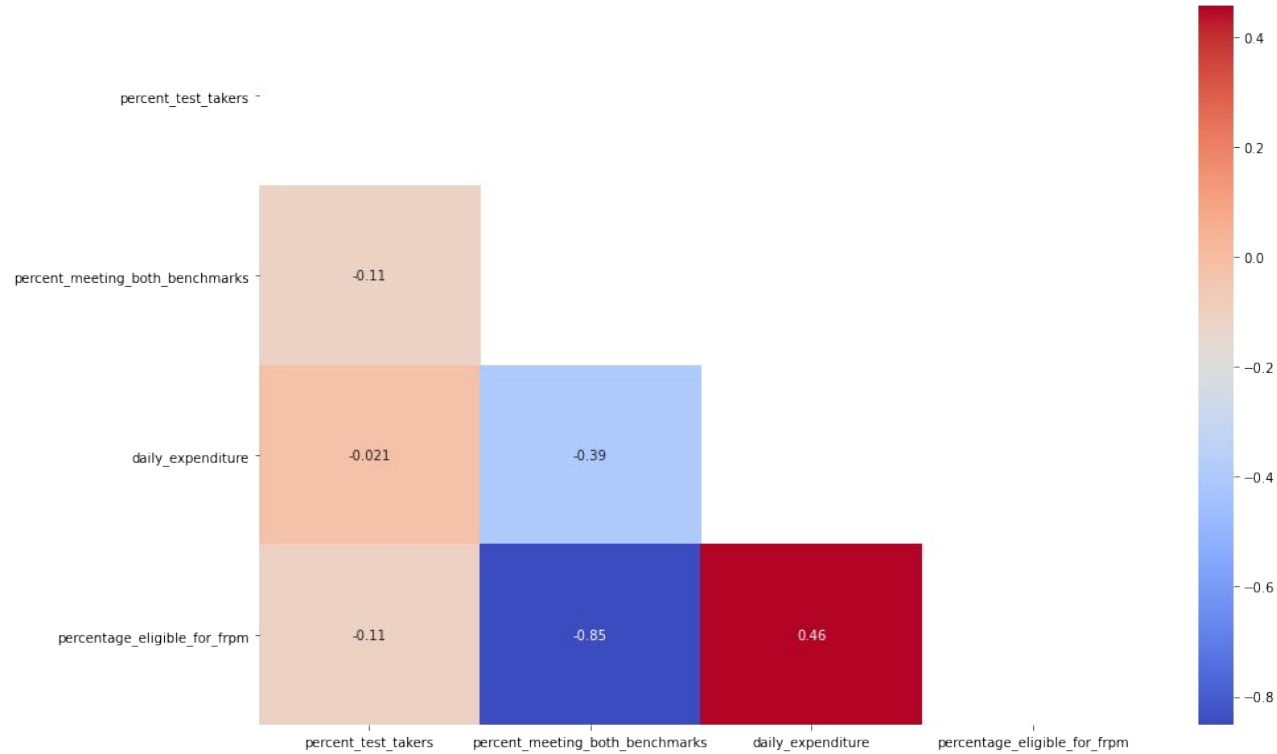
Sources: <https://nces.ed.gov/fastfacts/display.asp?id=158>
<https://ed100.org/lessons/whopays>

Local Control Funding Formula (LCFF)

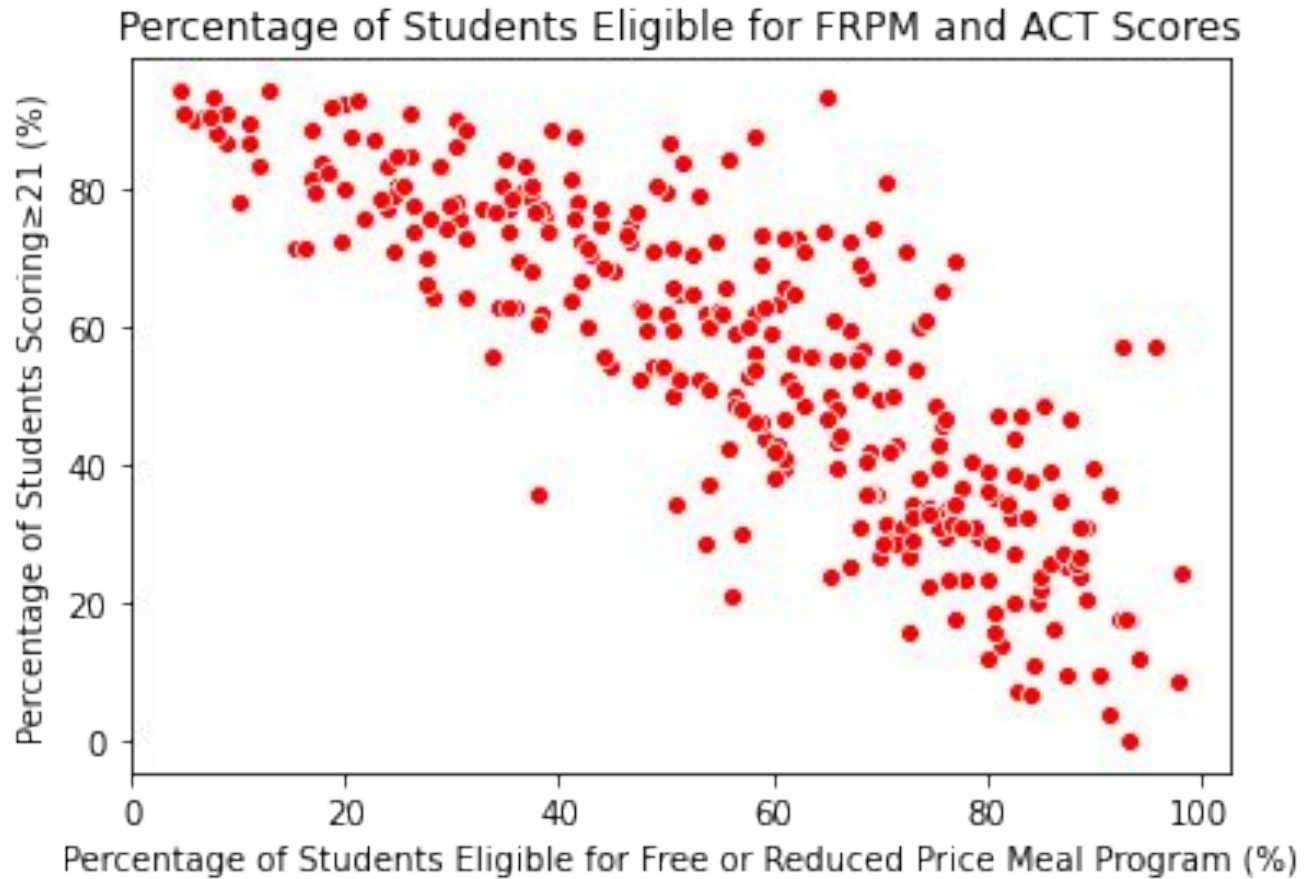
- The LCFF is used to determine how much state funds the school district receives
 - Schools with districts with higher levels of poverty, foster care, and/or districts with ESL students receive more state funding
- State Funding accounts for about 58% of education funds
- Local Property Taxes account for about 21% of education funds

Sources: <https://ed100.org/lessons/whopays>
<https://ed100.org/lessons/lcff>

SAT FRPM



Notice the strong correlation between eligibility for FRPM and the percentage of test-takers meeting the SAT Benchmarks



Note the downward trend of the scatter plot suggesting that student poverty levels have a high impact on students success on the ACT.

Conclusions

- The previous two visualizations show a strong negative correlation between socio-economic status of students and their success on the ACT and SAT.
- The Title I program and the LCFF were put into place to give each student equal opportunity to succeed. The data presented suggests the program is not doing enough to curb the difference between lower income students and their peers when it comes to ACT and SAT scores.
 - It has been suggested that even with the government funded program schools in lower-income areas are not getting enough funding.
 - Some argue that allocating state funds based on attendance rather than enrollment disproportionately hurts low income schools
 - The issue may be how the funds are allocated.
 - Districts get funding based on poverty level but the allocation of funds is purely decided by the district
 - Or money may not be the solution to solving the problem.
- It is safe to say that the current funding program is not doing enough to help underprivileged students prepare for college.

New Step

- Research how funds are allocated in school districts.
- Study how the initiation of these programs affected SAT/ACT scores