

CALIFORNIA DEPARTMENT OF EDUCATION 2019 SAT REVIEW



SHAWN SING - GA ANALYTICS



AGENDA

INTRODUCTION

PROBLEM STATEMENT

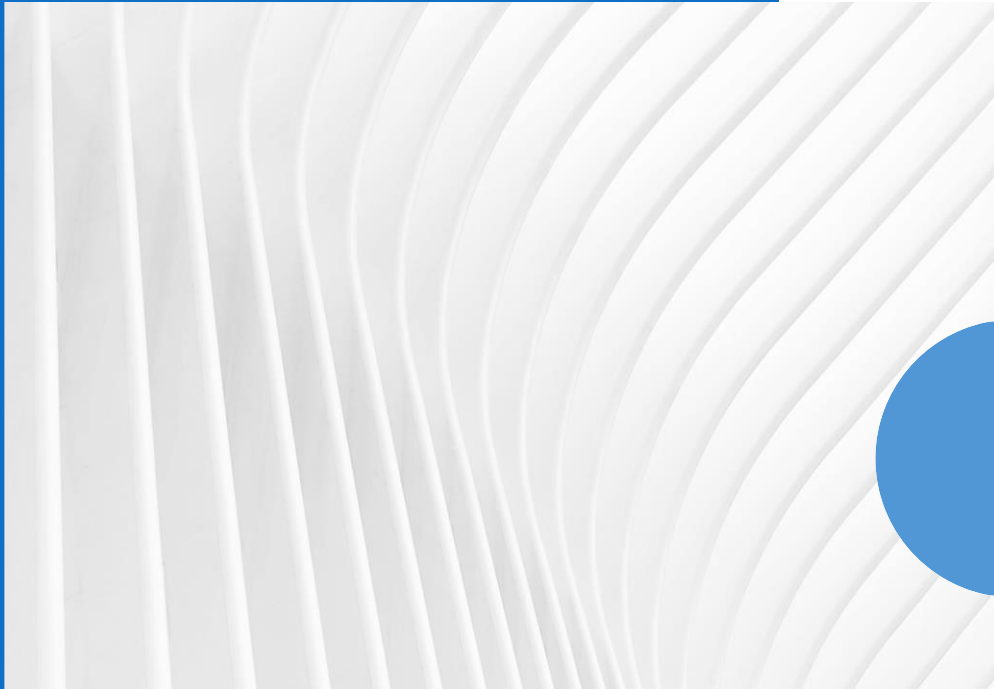
METHODOLOGY & FINDINGS

RECOMMENDATIONS

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SUMMARY

INTRO



At GA Analytics, we empower organizations to make more effective business decisions through the use of data. By leveraging data analytics, we help organisations make sense of big data.

The CDE has engaged GA Analytics to review 2019's SAT performance across school districts.

PROBLEM STATEMENT

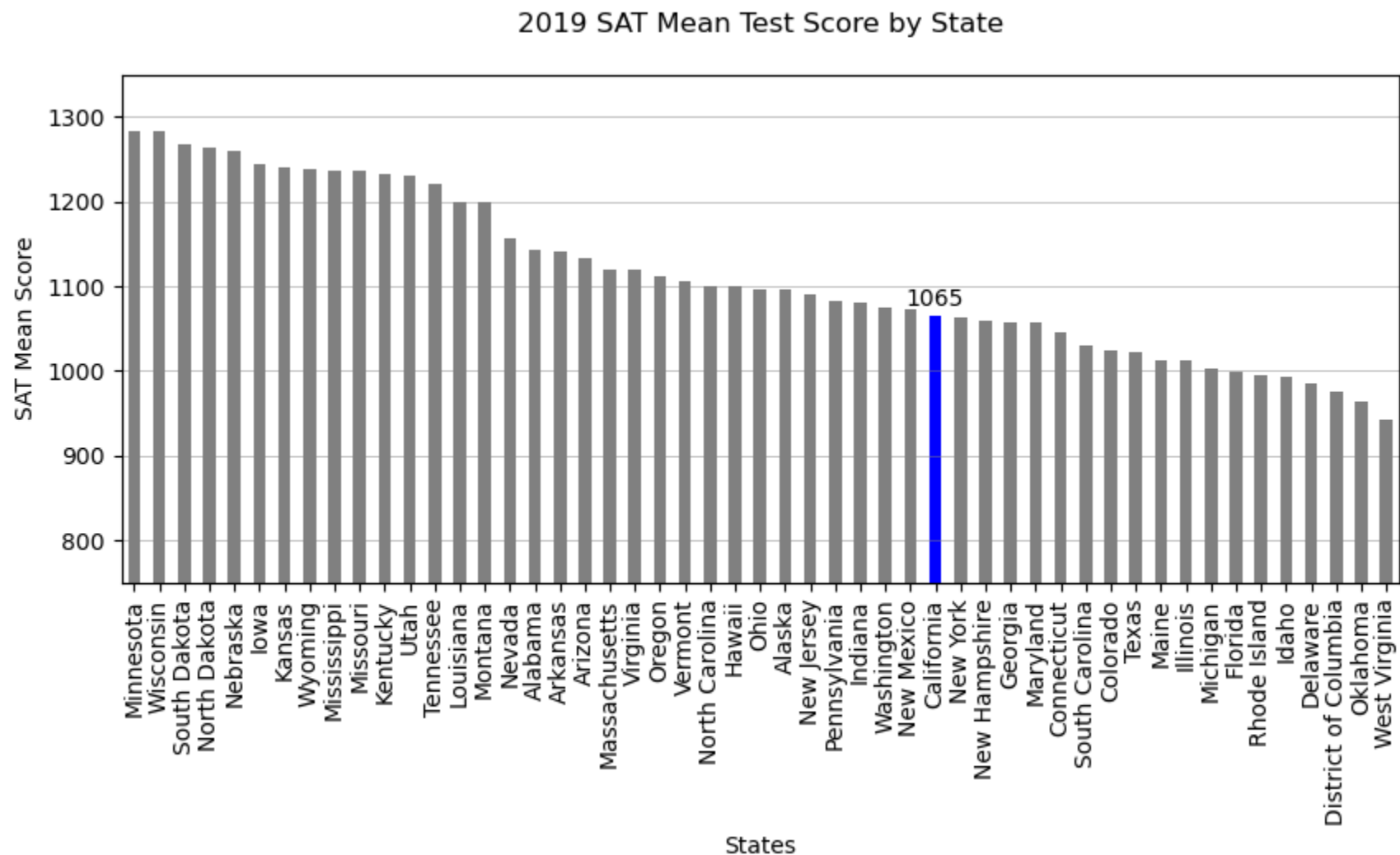
The state of California has one of the largest student population in the US, spread over 2,170 school districts. This project aims to identify districts with lowest overall student performance on the 2019 SAT tests so the California Department of Education (CDE) can recommend programs and better allocate resources to such districts in need.

METHODOLOGY

Based on data provided by CDE, as well as publicly available information, we analysed the SAT 2019 performance among Grade 12 students across the various school districts, based on number of students that met the SAT benchmark. Schools with 0 enrolment or had SAT participation levels that were too low for benchmarking were omitted from the analysis.

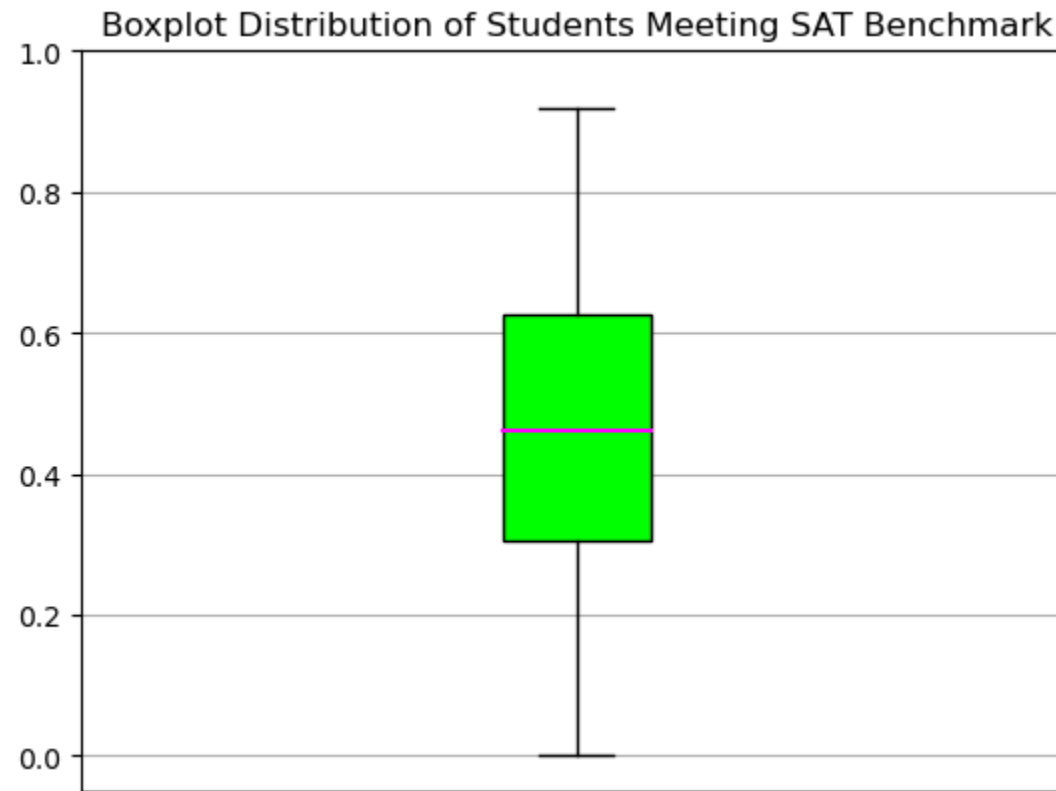
The top and bottom performing districts were isolated to identify if there may have been any other factors attributing to their performance.

Cross-referencing available data on student poverty, based on unduplicated count of students who are eligible for Free or Reduced-Price Meals (FRPM), we assessed whether there is any correlation between student poverty and performance.

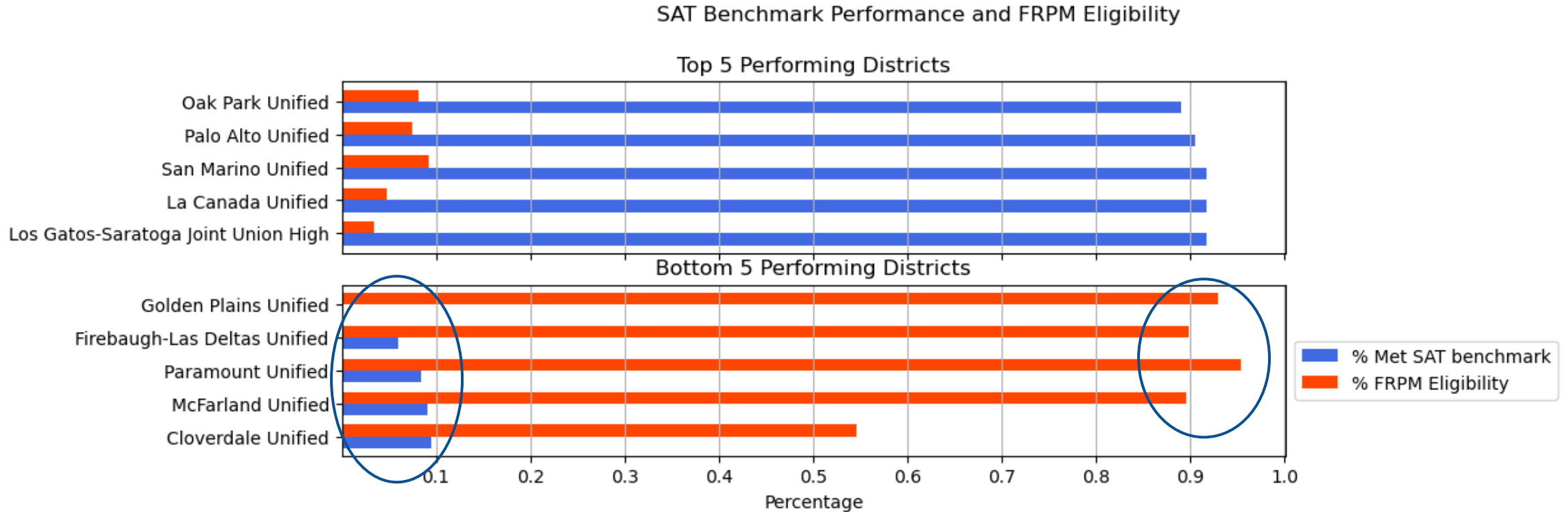


California was **ranked 33rd** among all the US states based on SAT mean test score, although the state's SAT participation rate of 63% was higher than the median of 54%.

There is room for improvement so as to better enhance our students' performance.

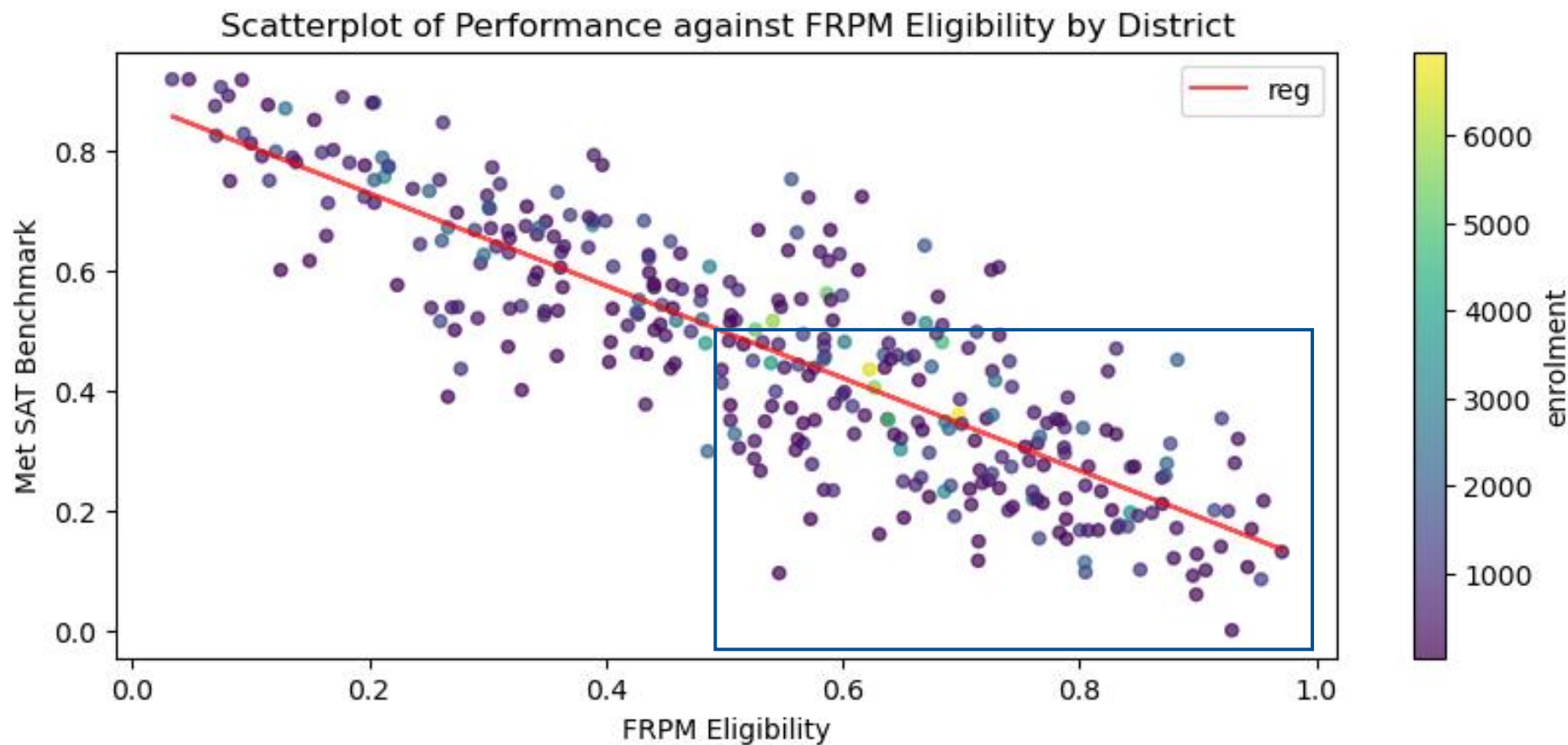


Among the 335 school districts analysed, there is a very wide range (0 - 0.92) for the percentage of students meeting the SAT benchmark.
Most districts achieved between 30% to 62% of their students meeting the SAT benchmark.



The top 5 performing districts achieved close to 90% of test takers meeting the SAT benchmark. At the same time, they have a low FRPM eligibility of less than 10%.

The **bottom 5** performing districts have less than 10% of test takers meeting the SAT benchmark. Yet, these districts generally have around **90% FRPM eligibility**.



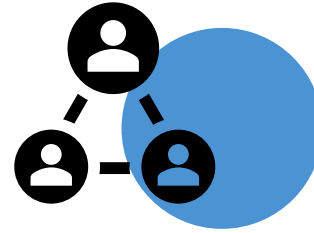
There is a **strong negative correlation ($r \sim -0.85$)** between percentage of students that achieve the SAT benchmark and FRPM eligibility.
Lower income districts may be where aid is required the most.

RECOMMENDATIONS



FUNDING

- While the LCFF has provided more financial resources to districts with higher proportion of lower income students, more could be done to help bridge the gap.
- A review of the School Facility Program (SFP) is timely in ensuring the proper condition and availability of facilities for lower income students.



STAFF

- California has an average student to teacher ratio of 22.7, one of highest in the nation. This restricts the ability of teachers to provide support to students.
- Beyond hiring more teachers through an increased budget, CDE can also consider a program to facilitate sharing of teaching resources between districts.



PARTICIPATION

- Standardised tests such as SAT have been shown to facilitate college entry for lower income students, providing an opportunity for upward economic mobility.
- Encourage students to maximise their SAT attempts to achieve a higher score.
- Schools should also devote resources to start preparing students from earlier grades.

LIMITATIONS

- Due to limited available information and budget, the project was only able to evaluate SAT performance in 2019. With more time and resources, the project could have expanded to include past datasets in 2017 and 2018 to observe for any trends.
- While the project focused only on Grade 12 students, the project could include performance of Grade 11 students, and perhaps identify if there has been any year-on-year improvement (assuming students will attempt the SAT in both grades).
- To provide a more holistic evaluation of the state's education performance, the project could also evaluate student performance based on GPA.
- Of the school districts evaluated, the Los Angeles Unified school district was omitted from the analysis due to its abnormally large enrolment size compared to the rest. There may be value in a follow up project to evaluate the trends within the district alone.

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EDUCATION IS NOT A WAY TO ESCAPE
POVERTY, IT IS A WAY OF FIGHTING IT.

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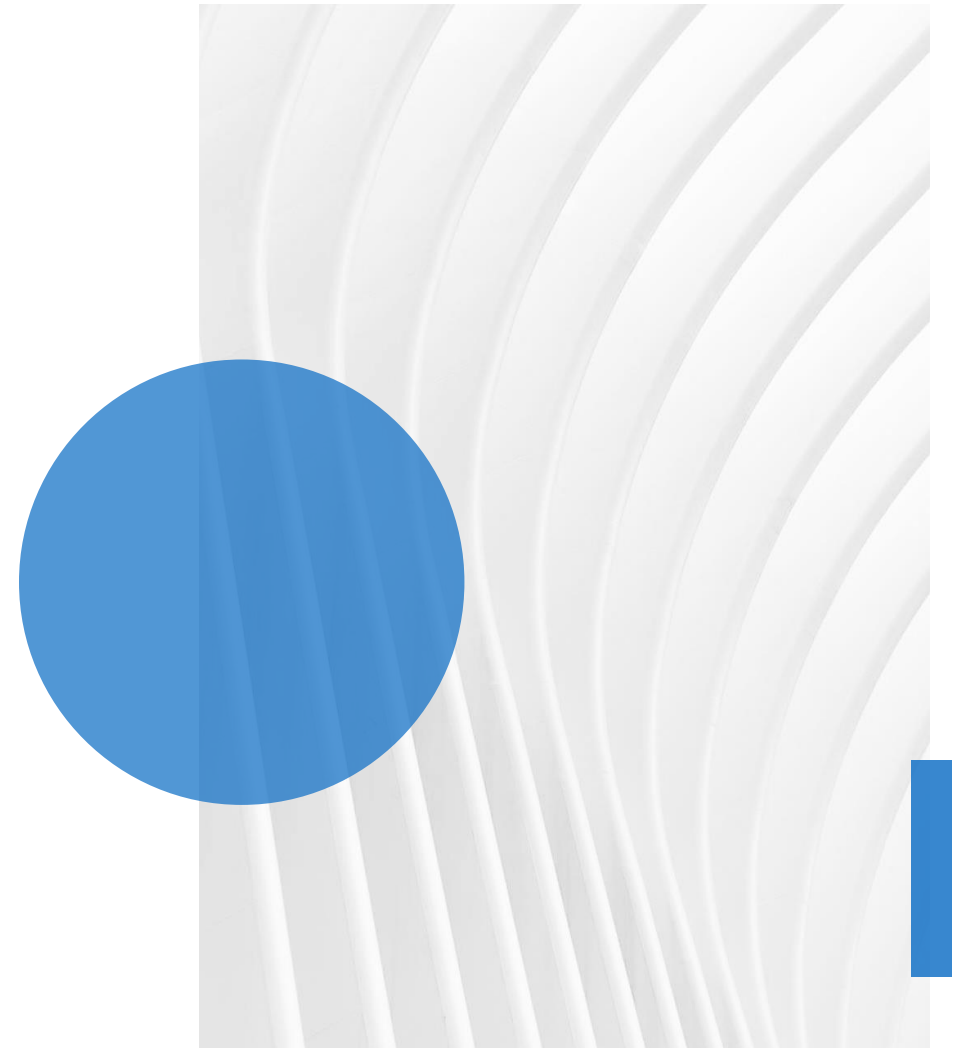
Julius Nyerere



SUMMARY

In line with the CDE's belief and purpose, we want to provide a world-class education for all students and prepare them to live, work and thrive.

Based on the findings and recommendations, there is an opportunity to review the budget and programs planned for 2020 so as to increase the efficiency and effectiveness of our efforts.



CITATION

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THANK YOU