

Racial Disparities in High School Advanced Courses

CST Senior Capstone

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Motivation

STEM Integration Experience on Racial Disparities

Notre Dame Center for STEM Education

- Single parents
- Bachelor's degrees
- Median income
- Gifted/talented programs
- Owner-occupied housing units
- Prisoners

What other disparities should we look at?

AP and Dual Enrollment in High School

Methods

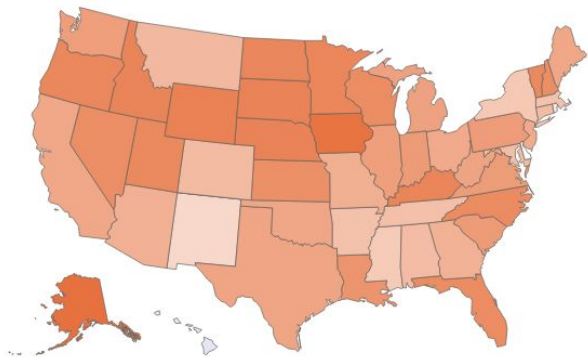
Data Sources: National Center for Education Statistics and Civil Rights Data Collection (U.S. Department of Education)

Total districts: 12,571

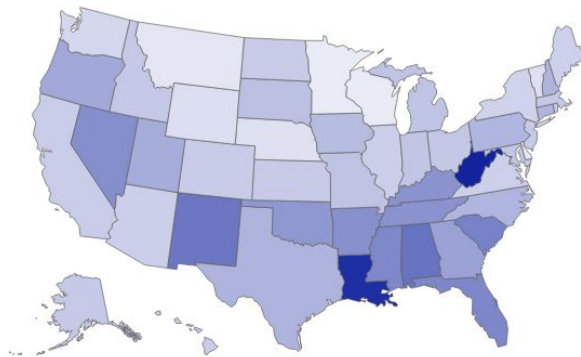
Chi-Squared Analysis: Is there a difference between proportions of students in advanced classes and what we would expect based on overall student population?

Disparity Factor: Calculate the severity of the racial disparity
 $((\text{actual}-\text{expected})/\text{expected})$

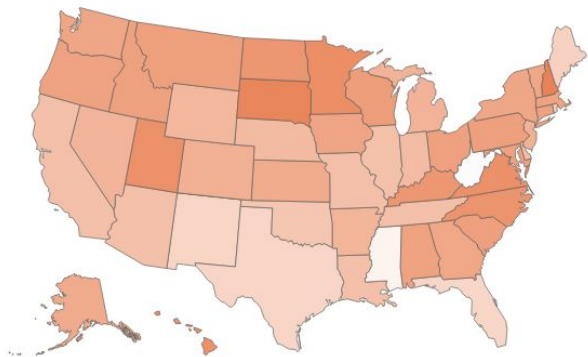
Black Disparity Index for AP Math Classes



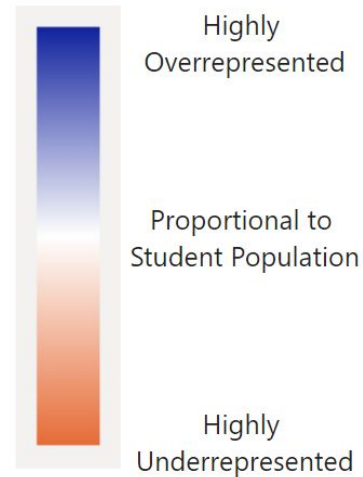
Asian Disparity Index for AP Math Classes



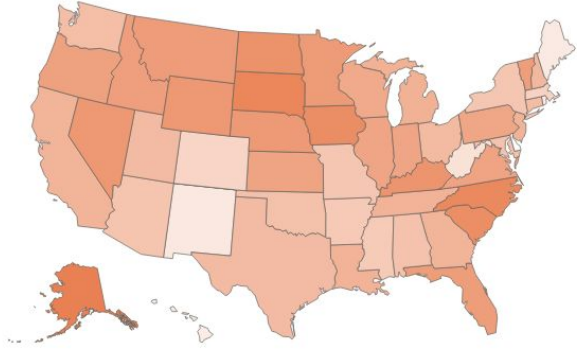
Hispanic Disparity Index for AP Math Classes



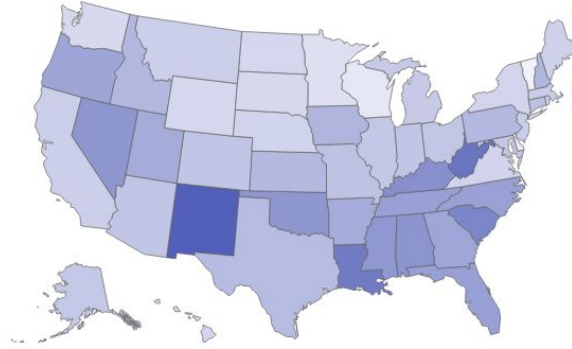
White Disparity Index for AP Math Classes



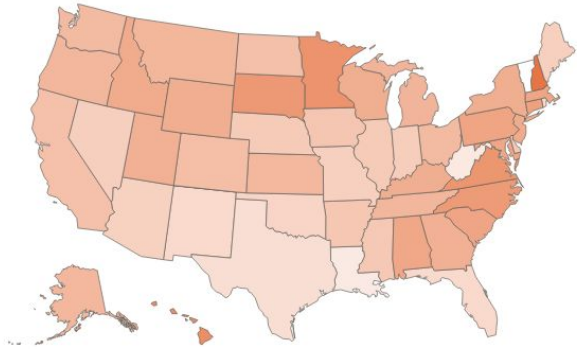
Black Disparity Index for AP Science Classes



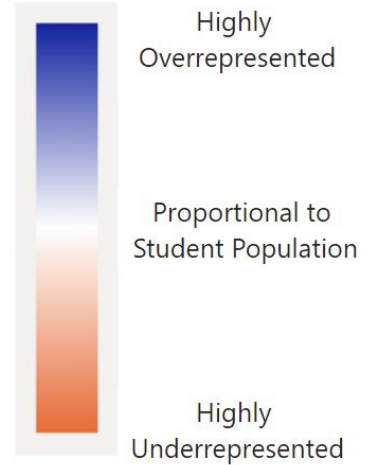
Asian Disparity Index for AP Science Classes



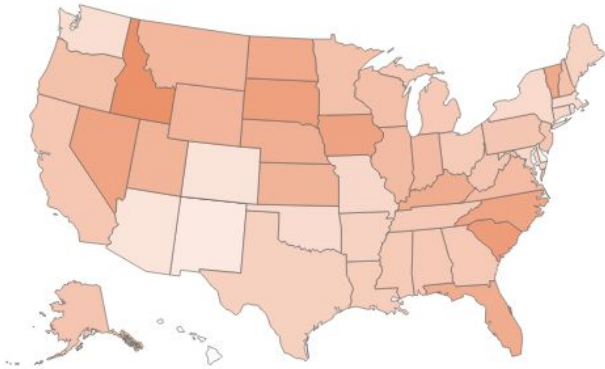
Hispanic Disparity Index for AP Science Classes



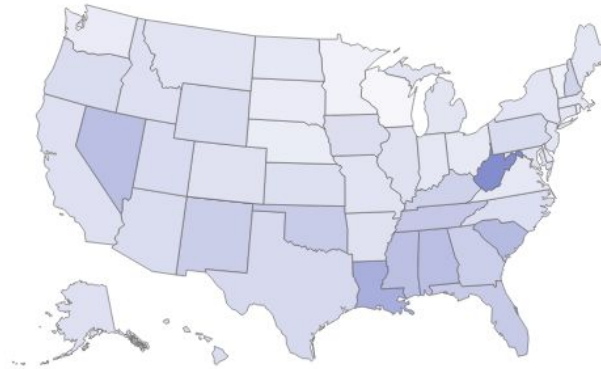
White Disparity Index for AP Science Classes



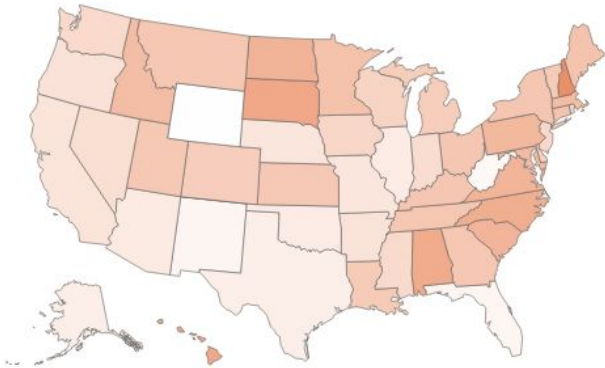
Black Disparity Index for Other AP Classes



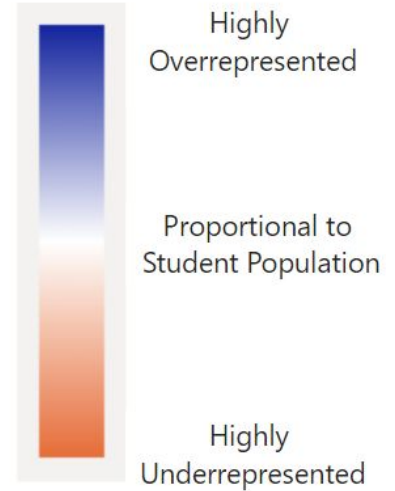
Asian Disparity Index for Other AP Classes



Hispanic Disparity Index for Other AP Classes



White Disparity Index for Other AP Classes



Results

White students are slightly more likely to be in these AP classes than average.

Asian students are as much as 4 times more likely to be in these classes.

Black, Hispanic, and other minority racial categories are much less likely to be in these classes, as few as 20-25% of what we expected based on student population.

Disparities are worse in STEM courses.

There is a significant disparity in every state and every locale (rural, town, suburb, and city).

Cautions

Racial categories can be an incomplete representation of population.

Analysis includes underrepresented minority groups in the “Other” category.

Reinforces false stereotype of the Asian “model minority”.

Analysis shows structural disparities exist; cannot give definite reasons.

Does not say whether advanced classes available in minority schools, only student participation in what is available.

“...all men are equal in natural dignity; and so, on the doctrinal and theoretical level, at least, no form of approval is being given to racial discrimination. All this is of supreme significance for the formation of a human society...”

Pacem in Terris, 1963, para. 44

“Working to improve education in our society is an investment in the future, an investment that should include both the public and private school systems.”

Economic Justice for All, 1986, para. 204

Solutions through Subsidiarity

Localized Solutions

- Educate teachers by sharing this analysis
- Teachers and schools can assist individuals and groups in underrepresented populations and all with unrecognized potential

National Solutions

- National problem
- Awareness and funding for accelerated programs for young underrepresented students

Thank You

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