Toward the Development of Equity Indicators for California

PACE Webinar
April 3, 2020

Christopher Edley, Jr., Heather Hough, Michal Kurlaender, sean reardon

PACE
Policy Analysis for California Education

Today's panelists

Heather J. Hough
Executive Director, Policy Analysis for California Education

Christopher Edley, Jr.
The Honorable William H. Orrick, Jr. Distinguished Professor, UC Berkeley School of Law

sean reardon
Professor of Poverty and Inequality in Education, Stanford University

Michal Kurlaender
Professor of Education Policy, University of California, Davis

Today's agenda

- Overview of the NRC report on Educational Indicators (Edley)
- Examples of recent research that flesh out the indicators
  - The Educational Opportunity Project at Stanford University (Reardon)
  - The California Education Lab at UC Davis (Kurlaender)
  - Miscellaneous PACE & *Getting Down to Facts II* research (Heather)
- Discussion, recommendations & next steps (Edley)
- Q&A

Logistical notes

- Please type your questions & comments into the Q&A box
  - You can vote on others' entries, which will determine which questions get answered first
- Slides and links to resources can be found on the PACE event page: https://edpolicyinca.org/events/pace-webinar-toward-development-equity-indicators-california
  - Links to the event page and resources will also be posted for you periodically
- The video recording from this webinar will be posted online early next week

OPPORTUNITY INSTITUTE

Overview of the NRC Report on Educational Indicators

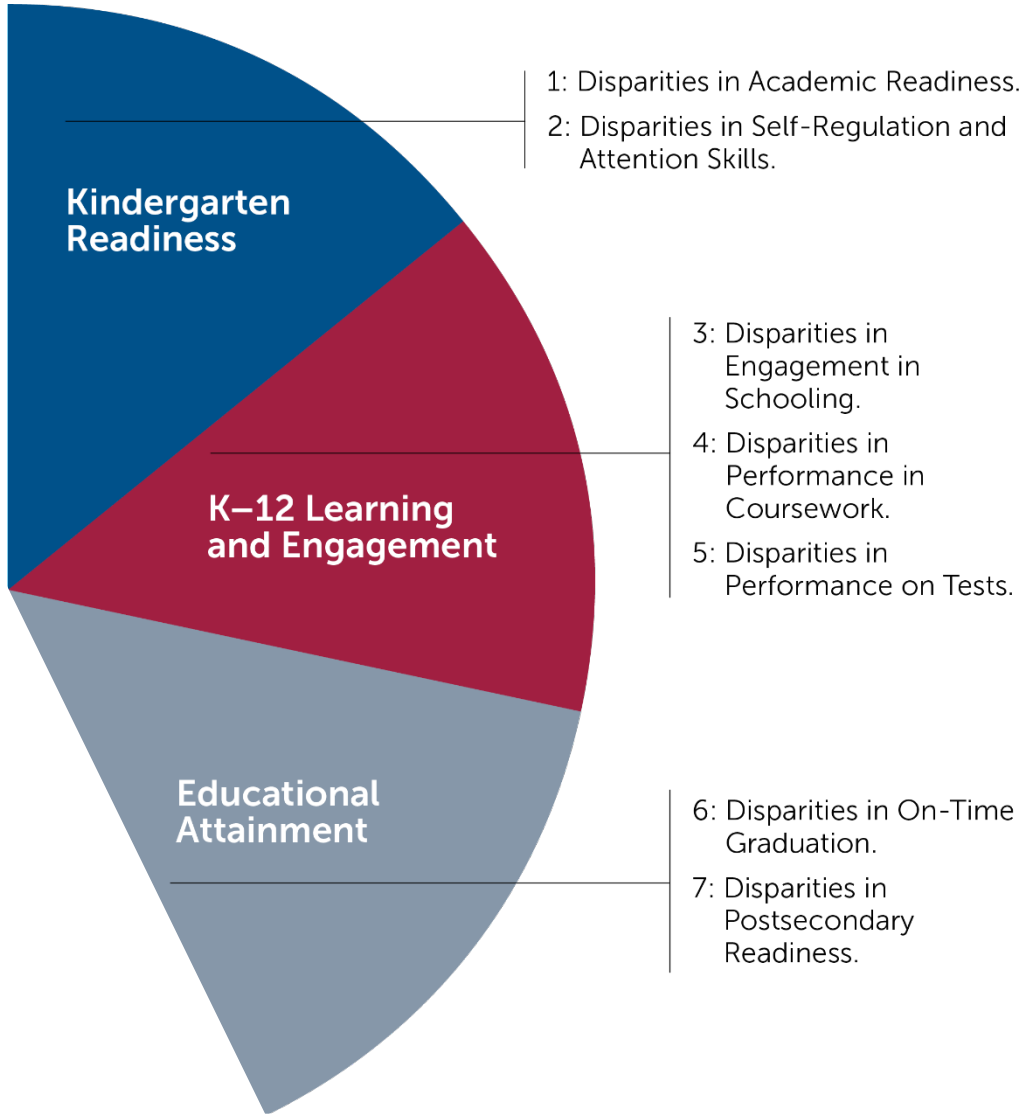
Christopher Edley, Jr.
April 3, 2020

A Great Indicator System -- Elements

1. measure multiple dimensions of outcomes and opportunities, over time;
2. disparities most salient for policy;
3. comparable across time/place, at several organizational scales (classrooms to national);
4. indicators and measures appropriate to grade level;
5. contextual and structural characteristics of or affecting the educational system, such as racial segregation and concentrated poverty;
6. frequent, understandable, high-level summary statistics, *plus* nuanced;
7. based on scientifically sound measures; and
8. mechanisms for continuous improvement based on research and other developments.

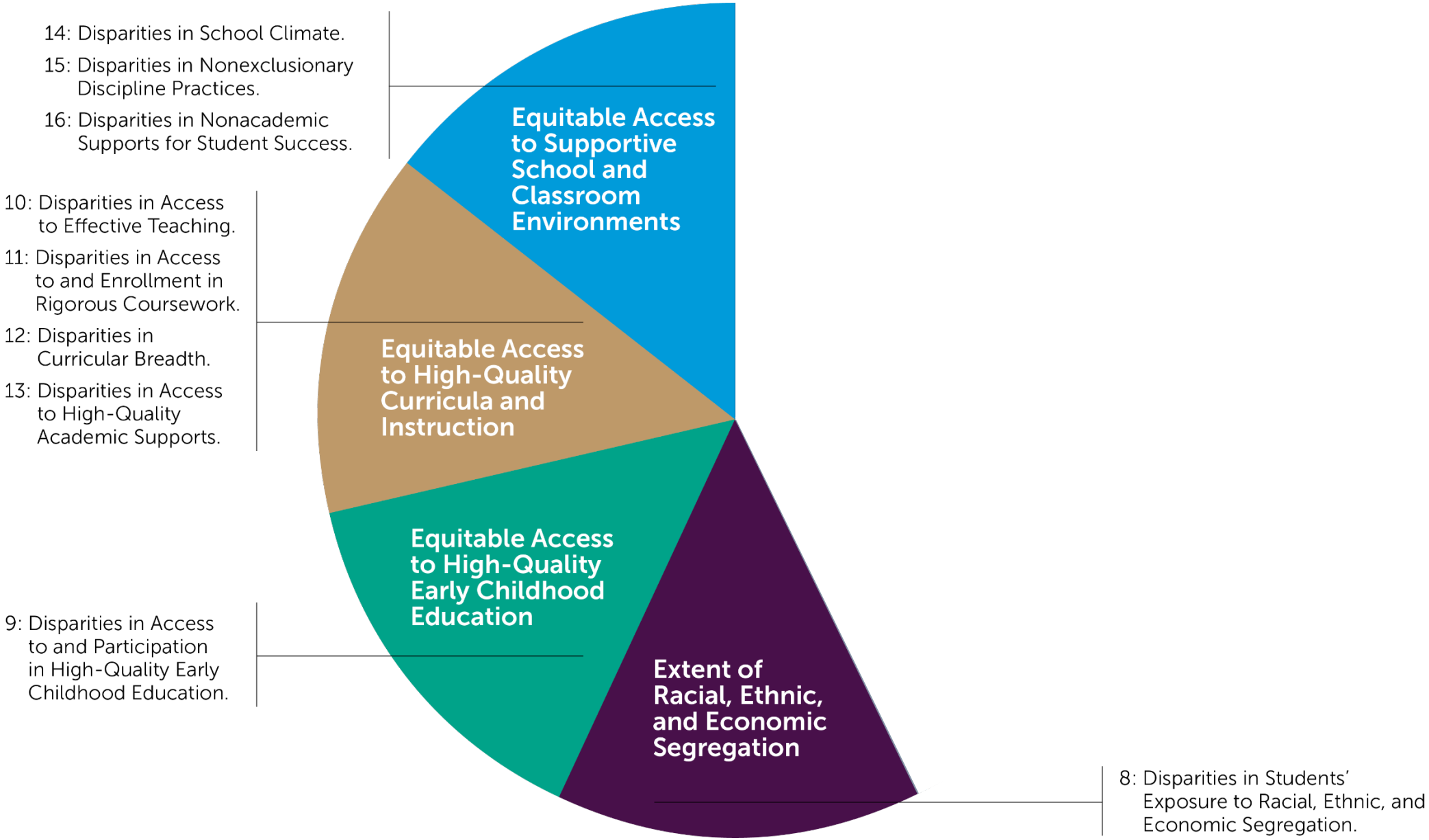
Indicators of Disparities in Student Outcomes

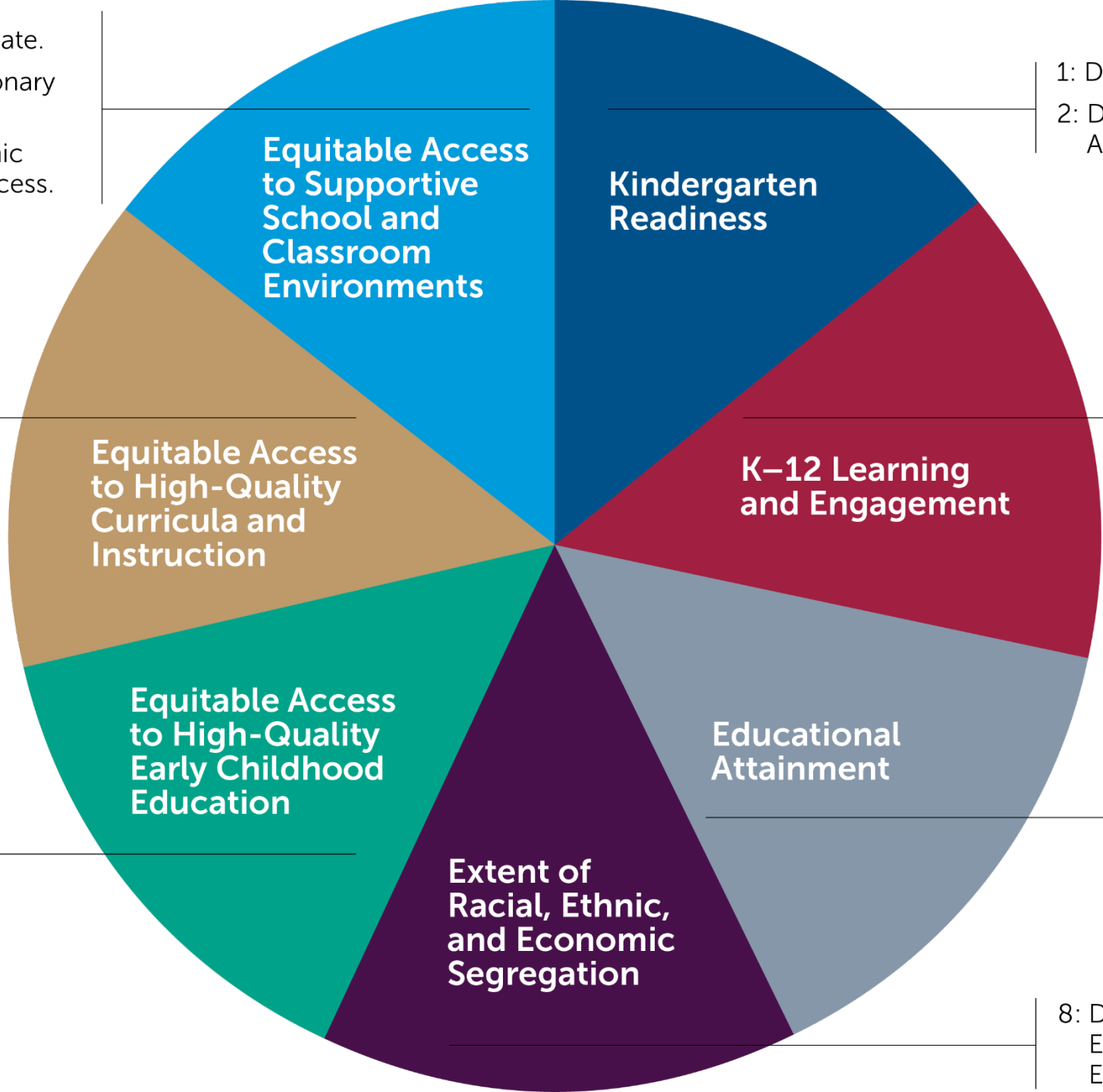
3 Domains; 7 Indicators



Indicators of Disparities in Access to Opportunities and Resources

4 Domains; 9 Indicators





1: Disparities in Academic Readiness.

2: Disparities in Self-Regulation and Attention Skills.

3: Disparities in Engagement in Schooling.

4: Disparities in Performance in Coursework.

5: Disparities in Performance on Tests.

6: Disparities in On-Time Graduation.

7: Disparities in Postsecondary Readiness.

8: Disparities in Students' Exposure to Racial, Ethnic, and Economic Segregation.

9: Disparities in Access to and Participation in High-Quality Early Childhood Education.

10: Disparities in Access to Effective Teaching.

11: Disparities in Access to and Enrollment in Rigorous Coursework.

12: Disparities in Curricular Breadth.

13: Disparities in Access to High-Quality Academic Supports.

14: Disparities in School Climate.

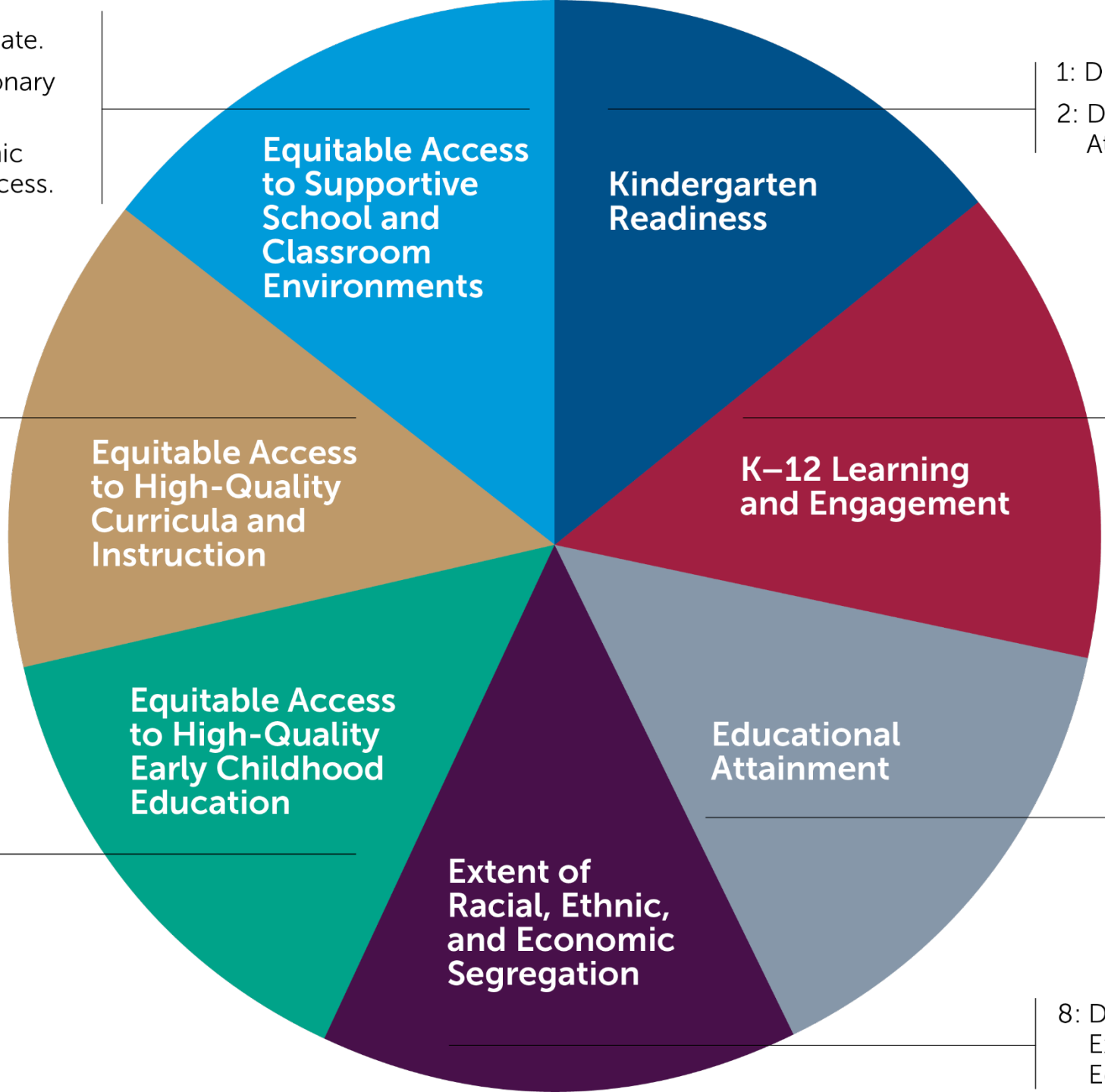
15: Disparities in Nonexclusionary Discipline Practices.

16: Disparities in Nonacademic Supports for Student Success.

Domain B: K–12 Learning and Engagement

Indicators, Constructs

3 Engagement in Schooling	- Attendance/absenteeism - Academic engagement
4 Performance in Coursework	- Success in classes - Accumulating credits (being on track to graduate) - Grades and GPA
5 Performance on Tests	- Achievement in reading, math, and science - Learning growth in reading, math, and science



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Domain F: Curricula and Instruction

Indicators, Constructs

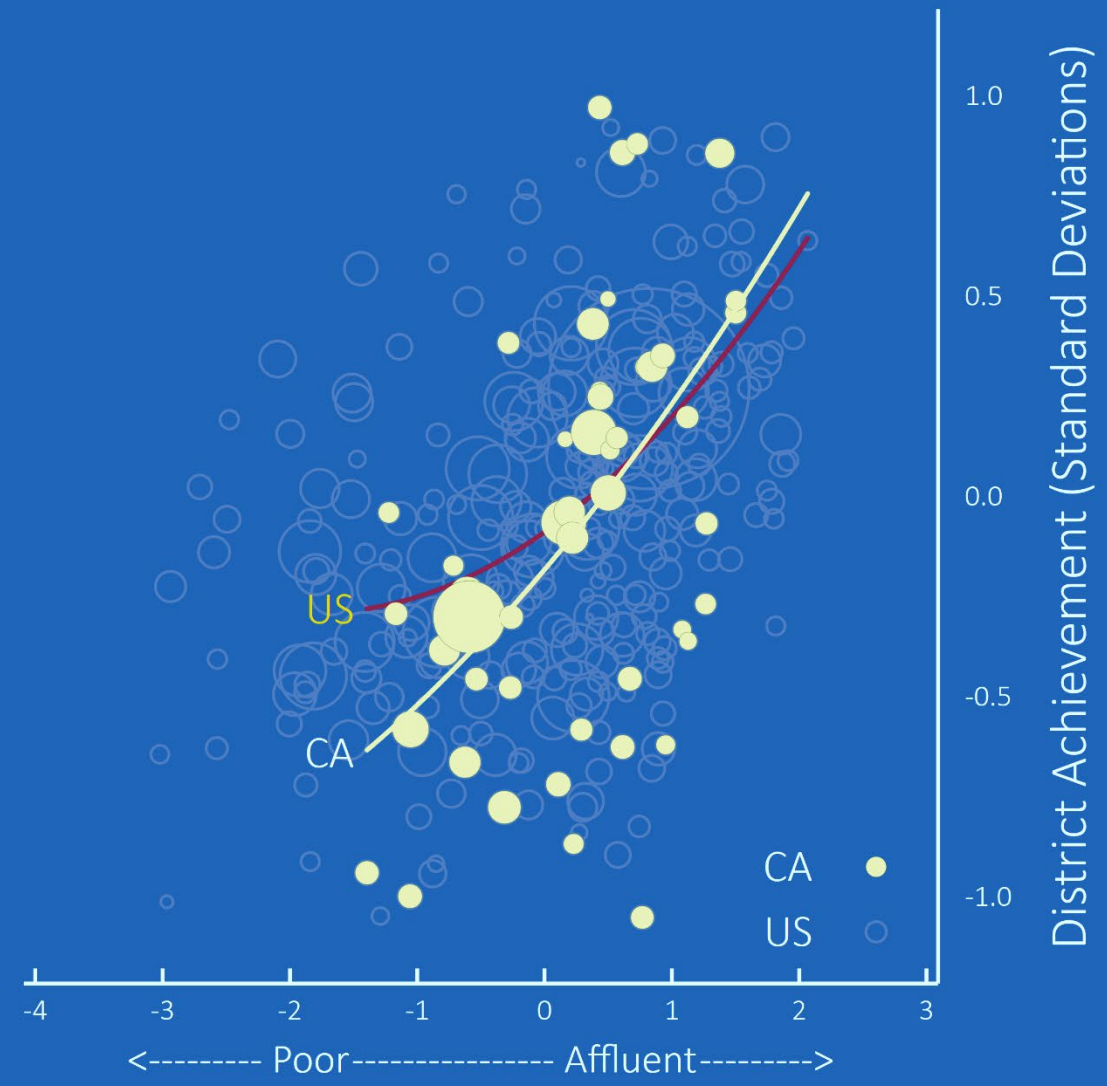
10 Disparities in Access to Effective Teaching	- Teachers' years of experience - Teachers' credentials, certification - Racial and ethnic diversity of the teaching force
11 Access to and Enrollment in Rigorous Coursework	- *Availability and enrollment* in advanced, rigorous course work - . . . AP, IB, and dual enrollment programs - . . . Gifted and talented programs
12 Curricular Breadth	- Availability/enrollment in arts, social sciences, sciences, and technology
13 HQ Academic Supports	- Access to and participation in formalized systems of tutoring or other types of academic supports, including special education services and ELs

equity and academic achievement in CA school districts

sean f. reardon
stanford university
3 april, 2020

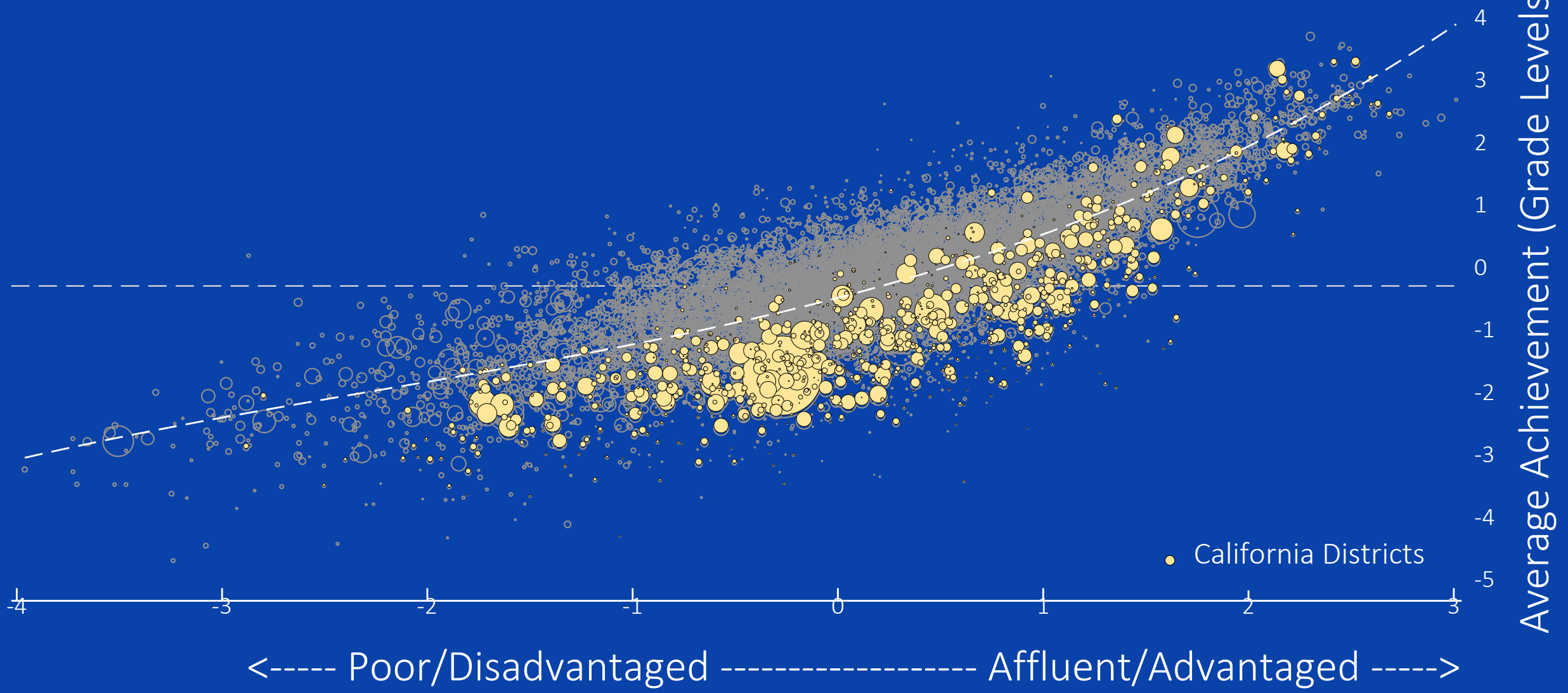
Kindergarten Readiness

Achievement at Kindergarten Entry and SES, All Students (2010)

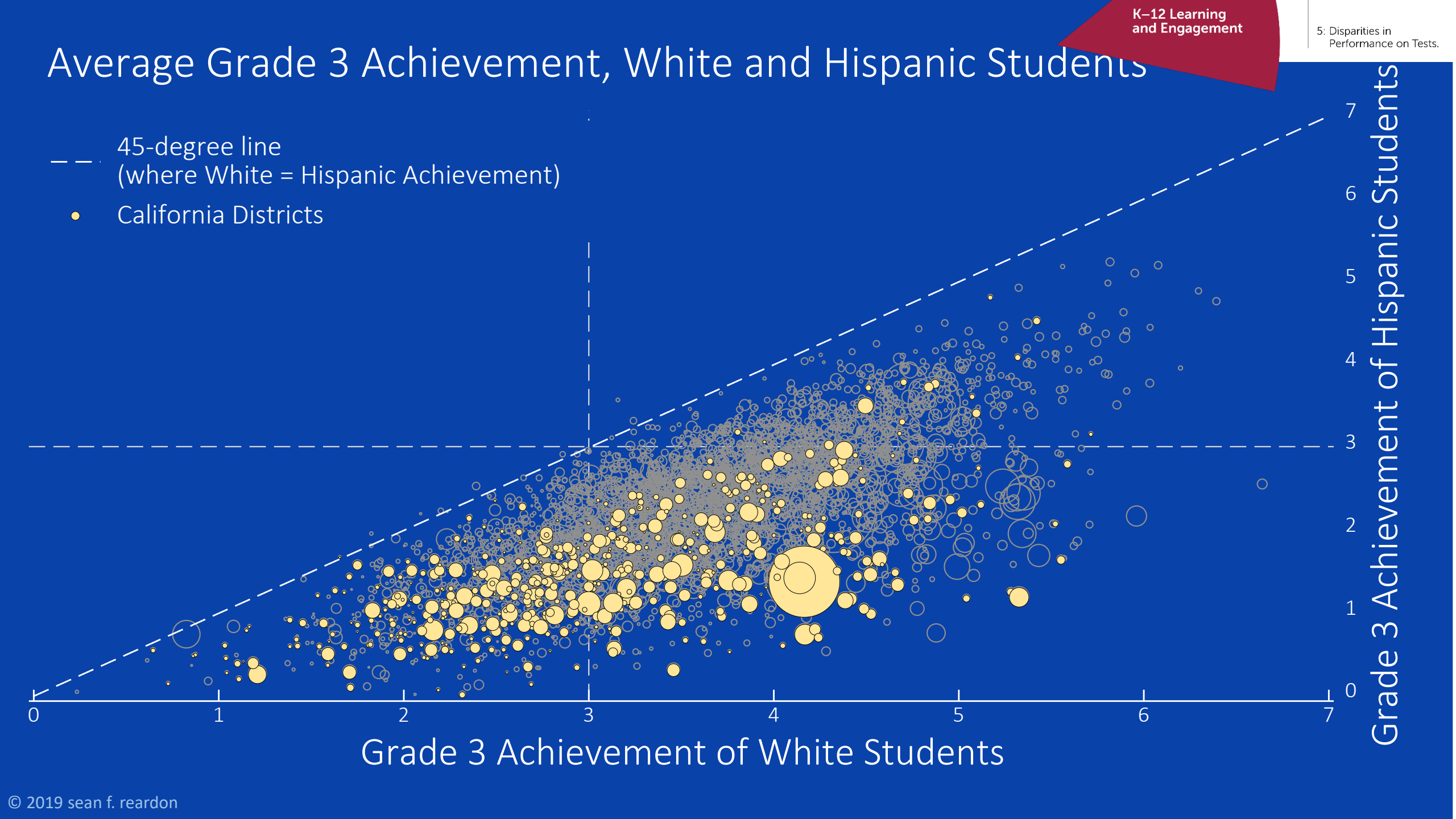


Academic Achievement and Socioeconomic Status

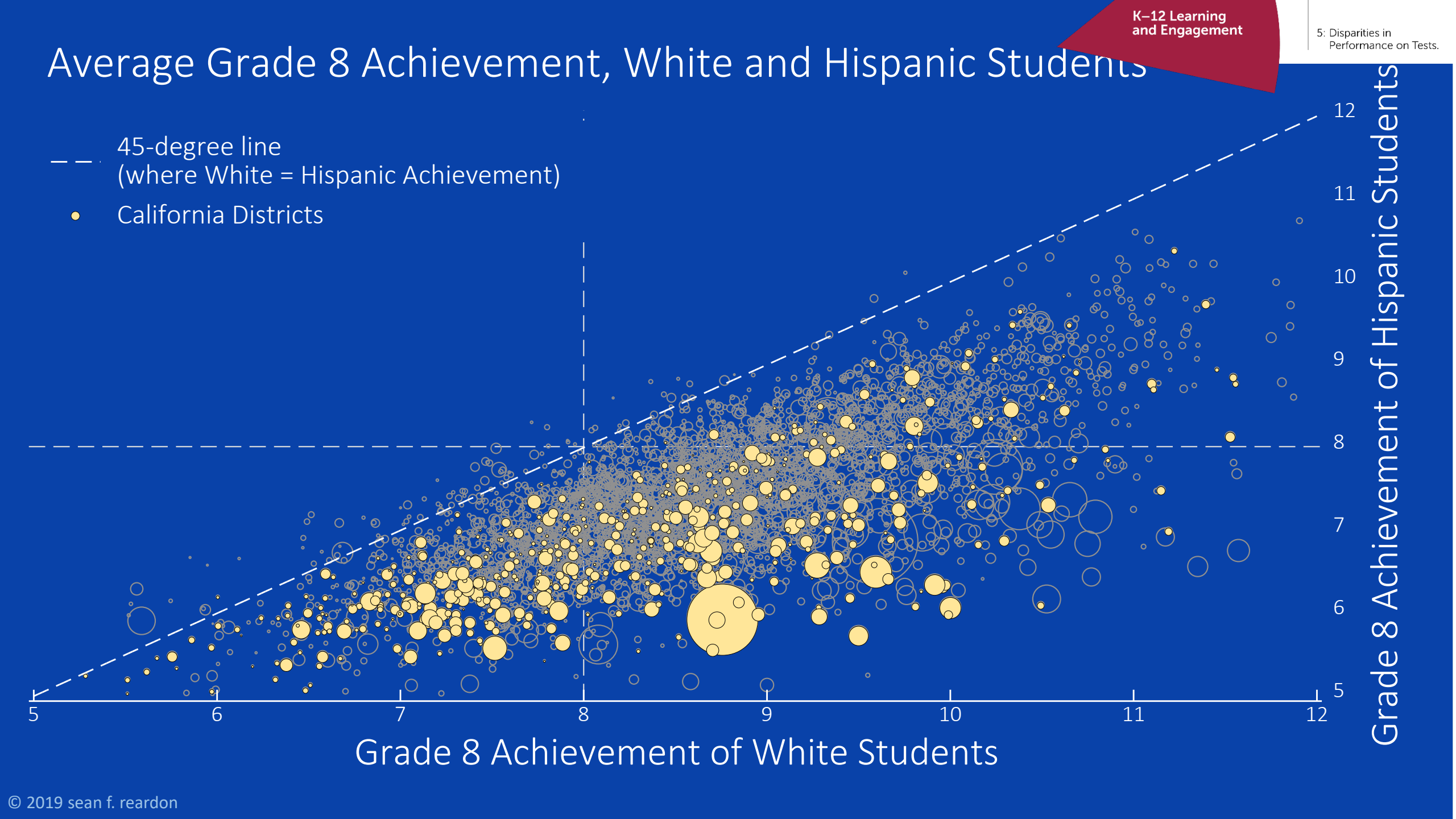
US School Districts, 2009-2016



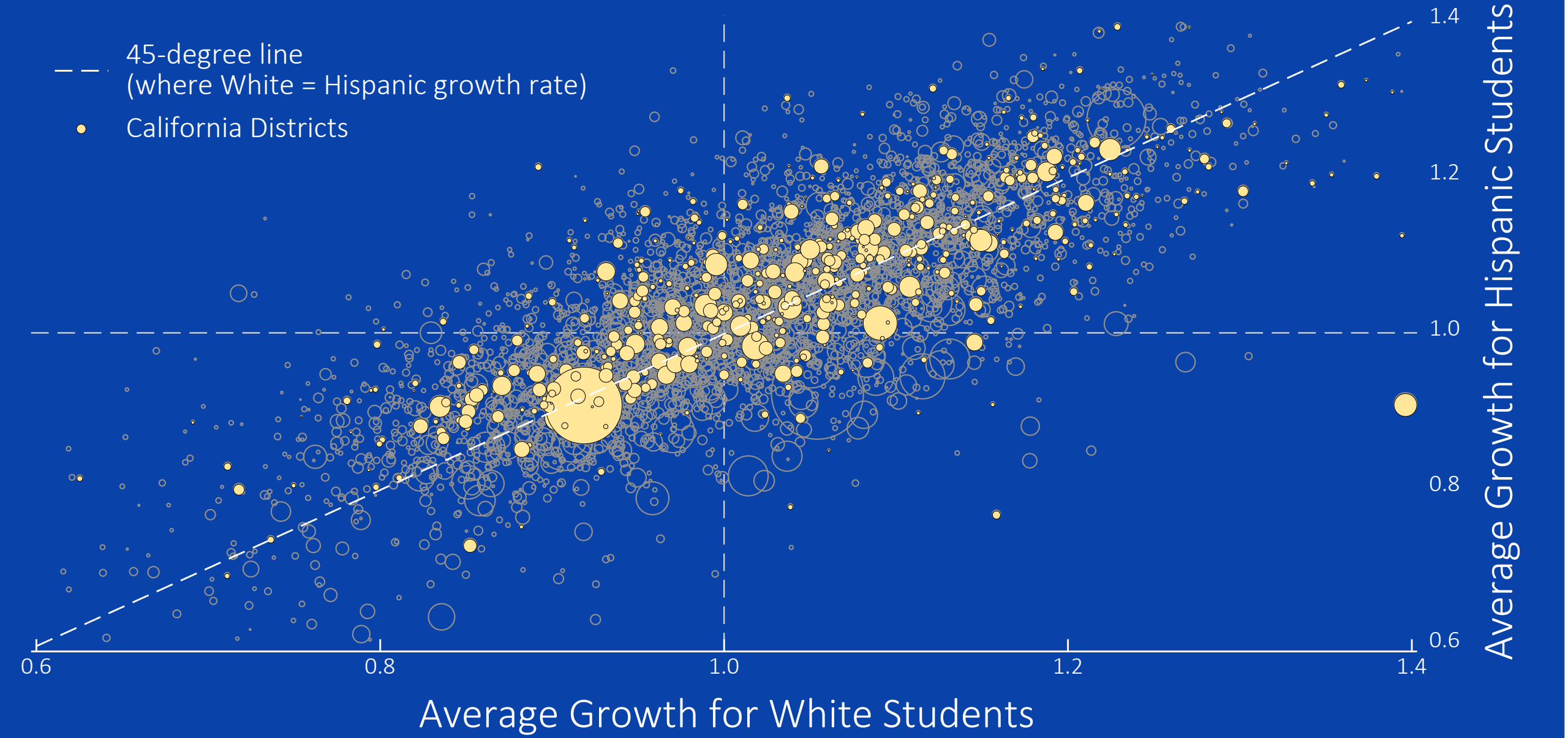
Average Grade 3 Achievement, White and Hispanic Students



Average Grade 8 Achievement, White and Hispanic Students



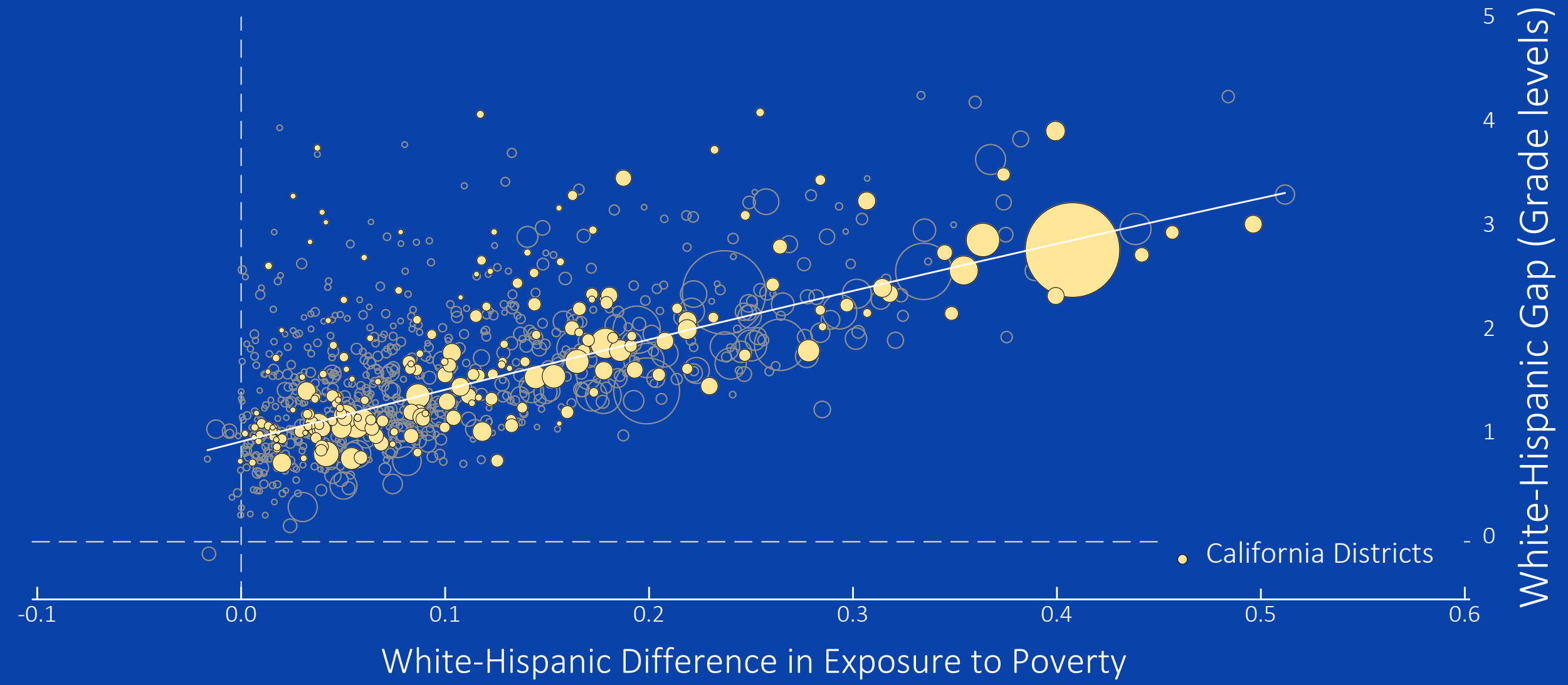
Average Achievement Growth, White and Hispanic Students



White-Hispanic Achievement Gap, by White-Hispanic Segregation

All US School Districts with at least 100 Hispanic & 100 White Students/Grade, 2009-2016

Extent of Racial, Ethnic, and Economic Segregation



Equity Indicators of College and Career Readiness

Michal Kurlaender
University of California, Davis

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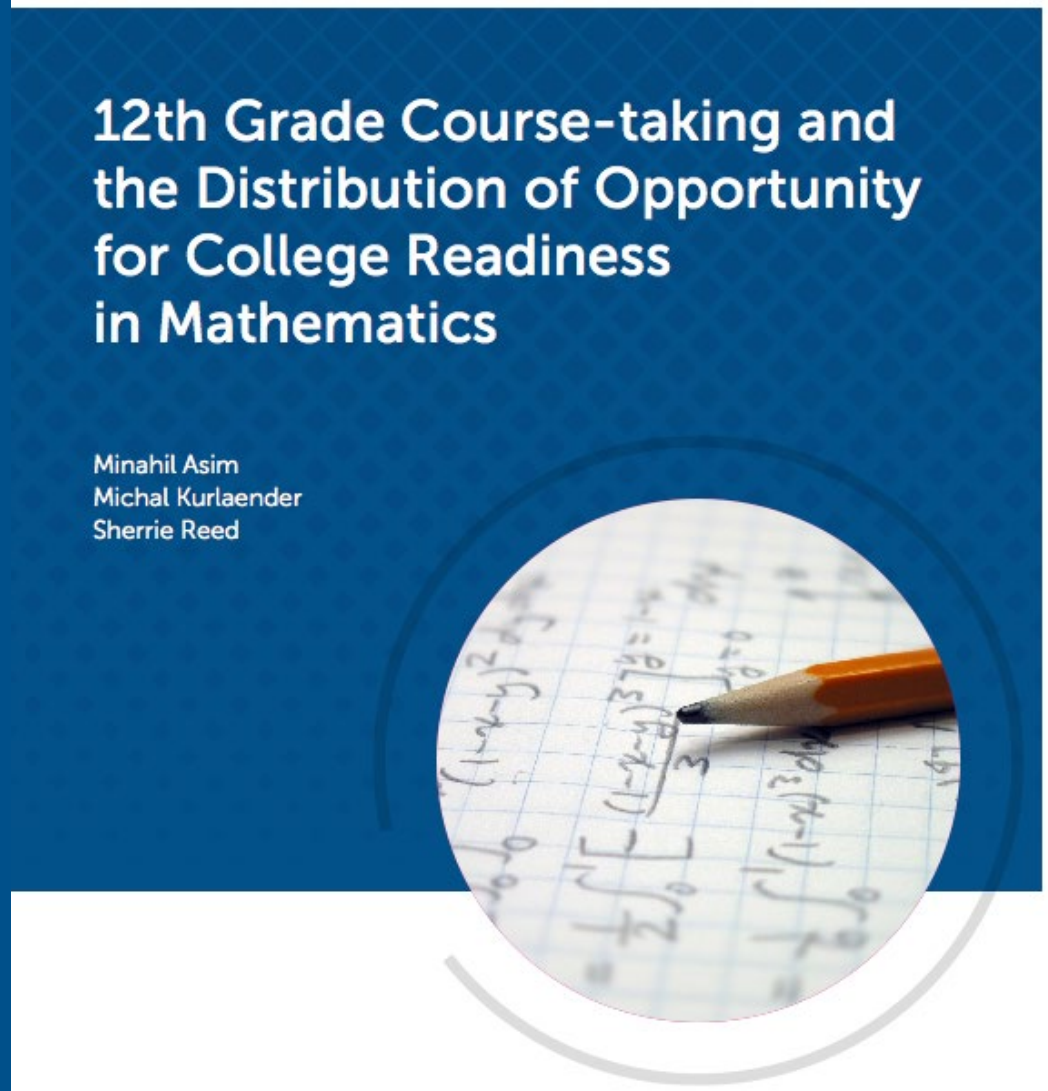
CALIFORNIA EDUCATION LAB
UC DAVIS SCHOOL OF EDUCATION

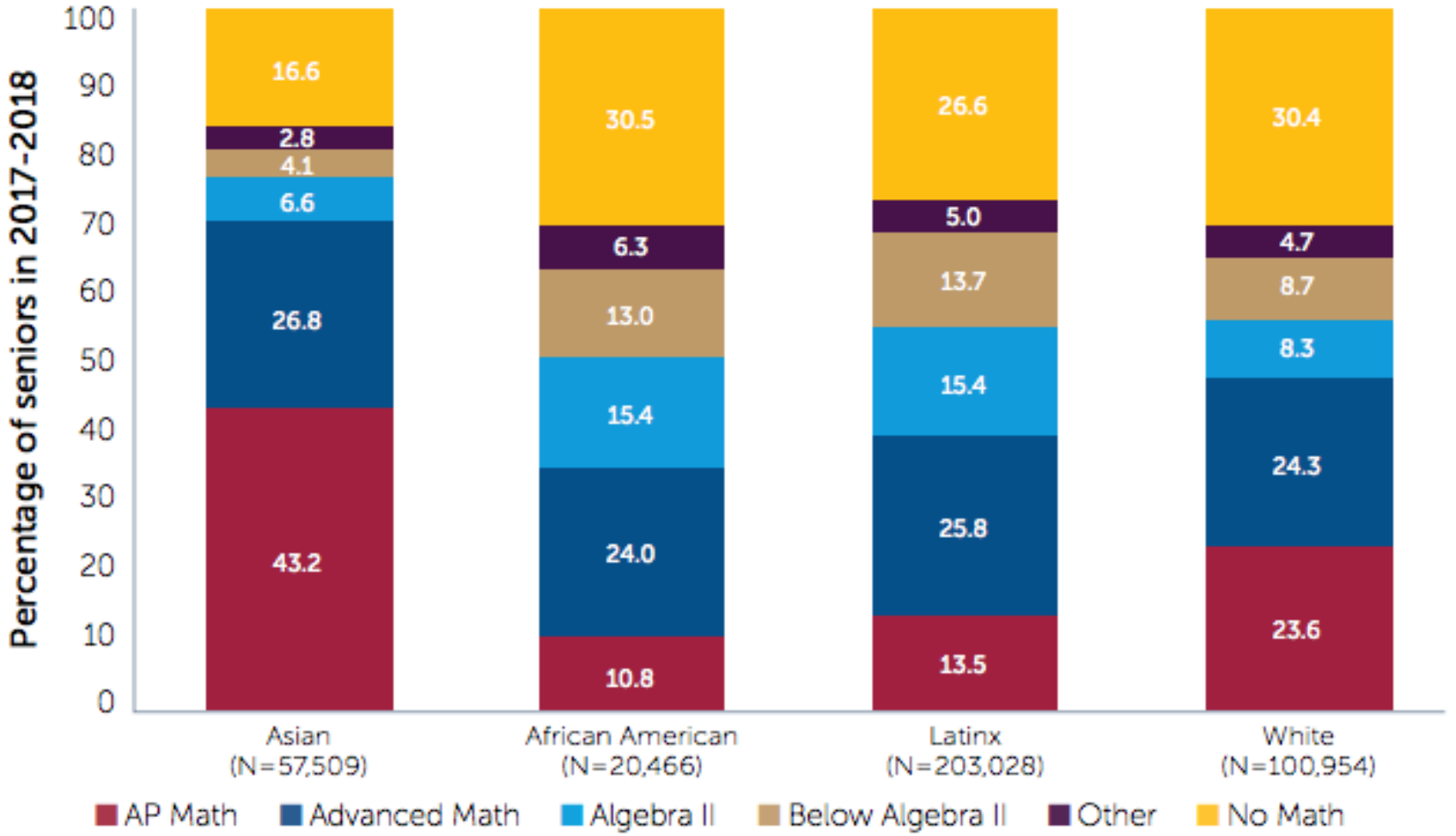


Although a large majority of college-bound students enrolled in math in their final year of high school, advanced math pathways are not equally accessed among California high school seniors. These disparities in enrollment patterns by race/ethnicity and school characteristics likely contribute to disparities in postsecondary access and success.

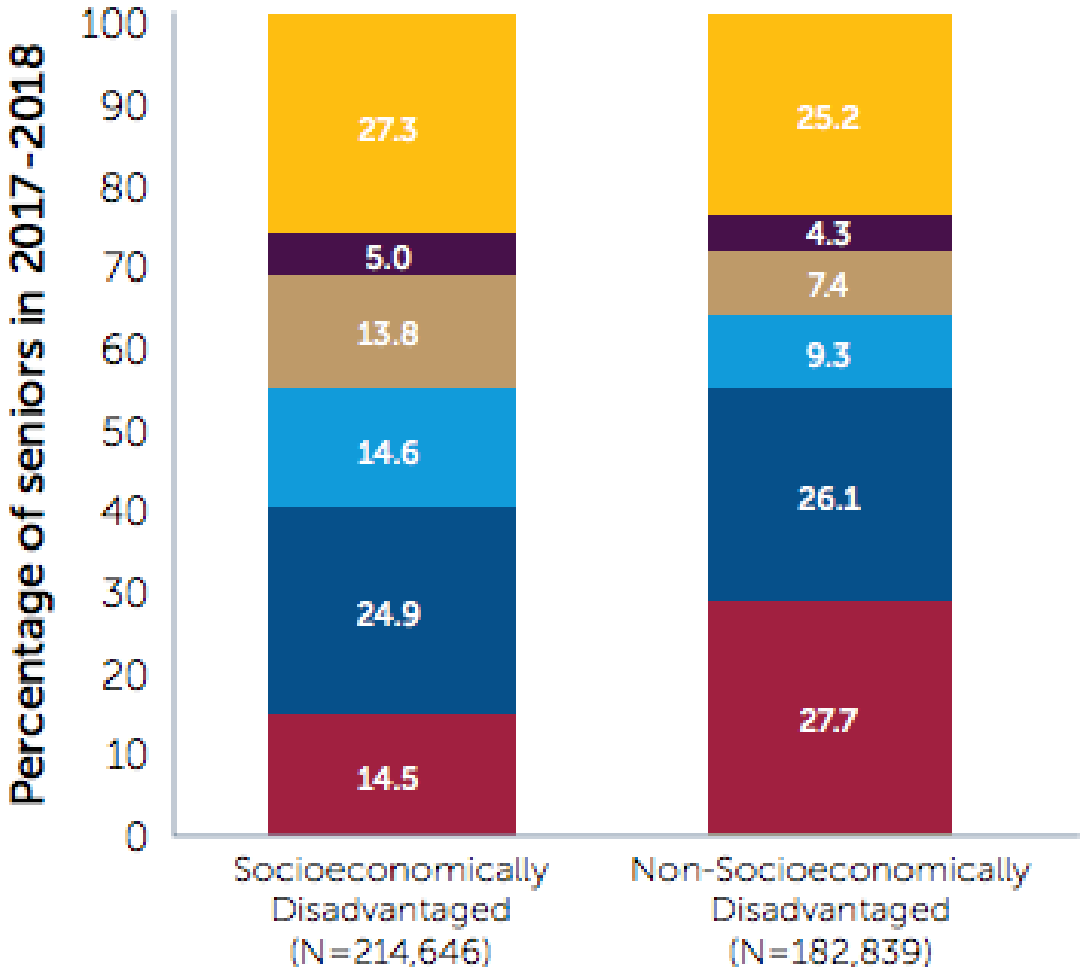
Math Course-taking by California 12th Graders

	Percentage of Students		
	2015-2016	2016-2017	2017-2018
AP Math	20.1	22.2	20.6
Advanced Math	22.5	25.5	25.5
Algebra II	12.7	11.8	12.1
Below Algebra II	14.0	10.6	12.9
Other	4.2	4.4	4.7
No Math	26.5	25.5	24.3
N	389, 027	387, 819	397, 485

12th grade Math Course-taking by Race/Ethnicity

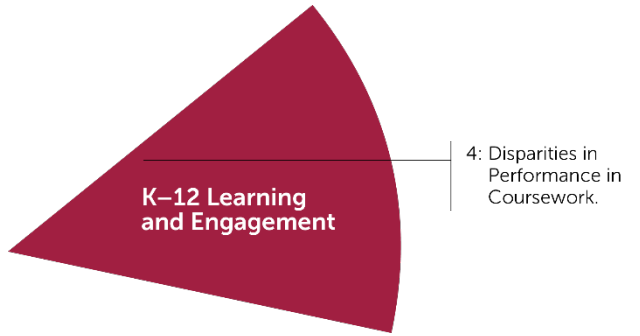


12th grade Math Course-taking by Socioeconomic Status

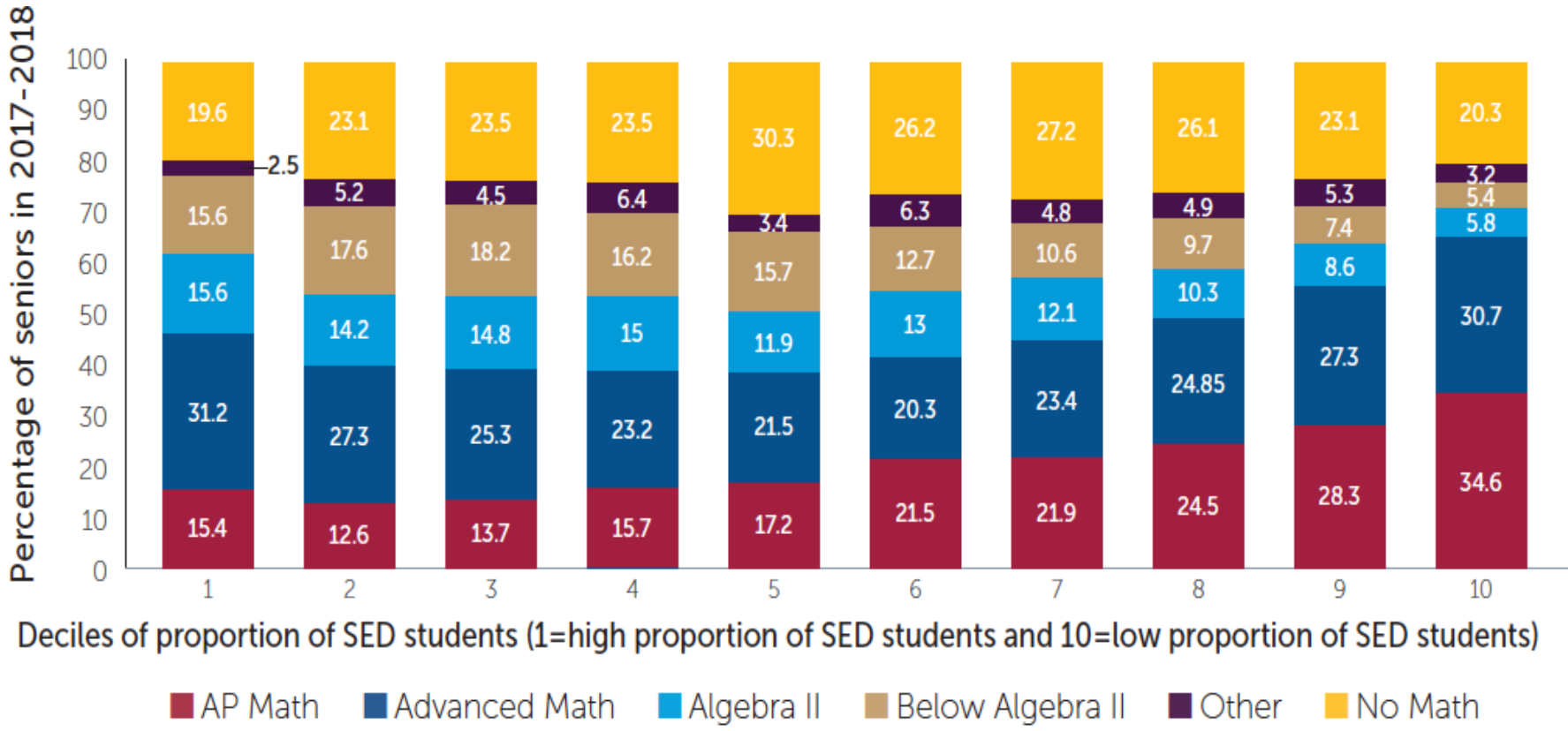


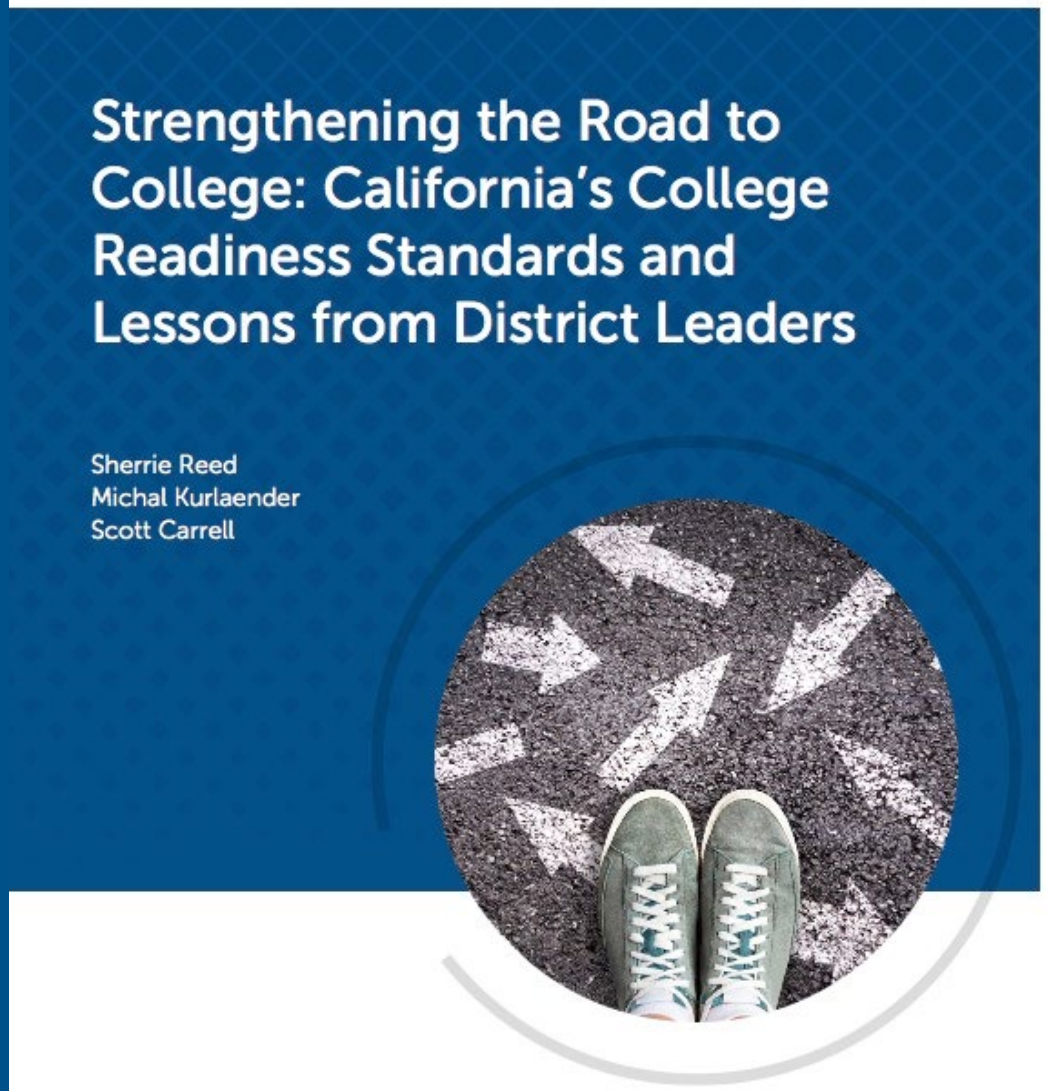
82%

of schools have more than half of their seniors enrolled in math



4: Disparities in Performance in Coursework.

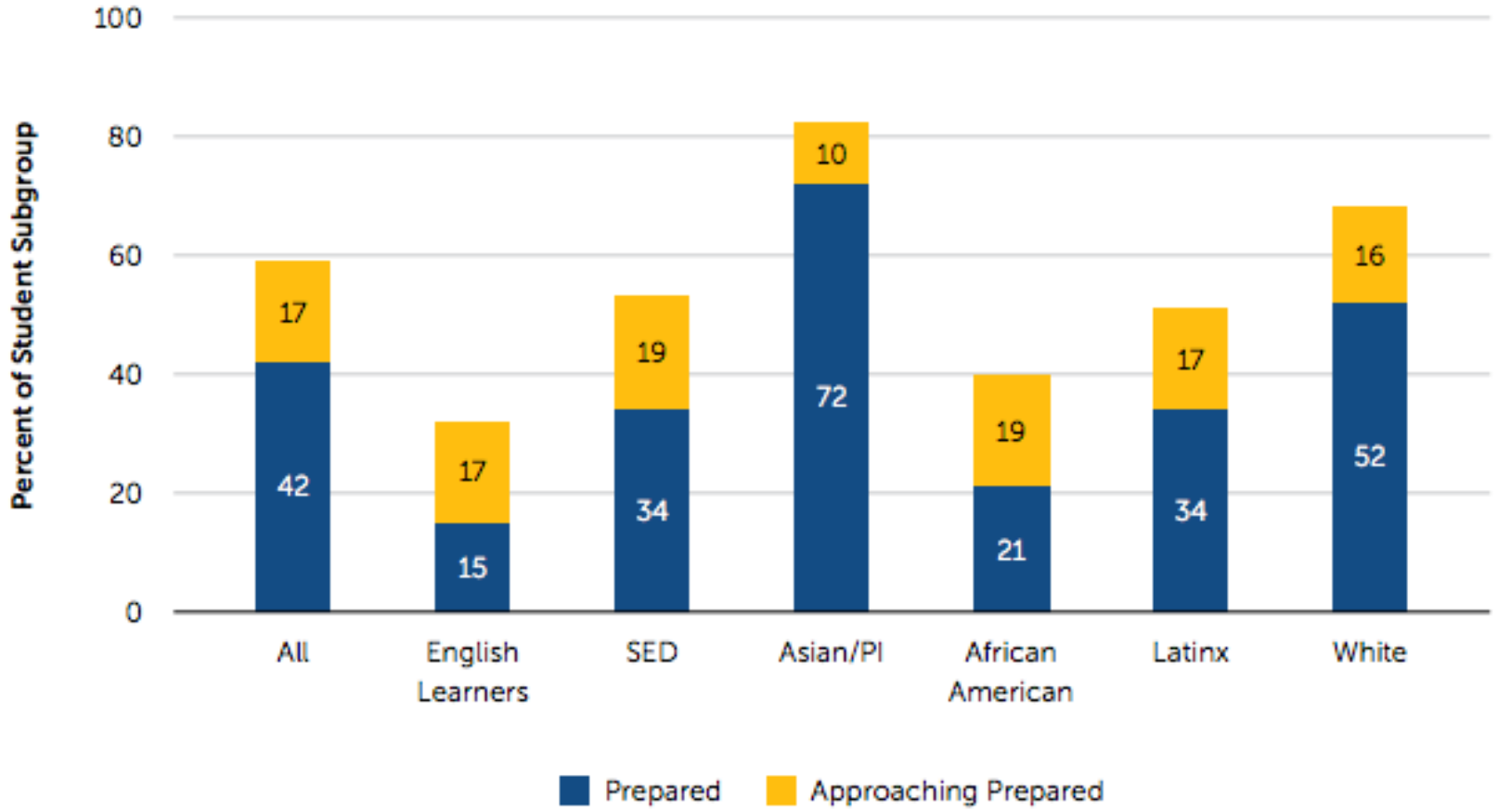




"We've been talking about college readiness for two or three decades now in our institution. What does it really mean, and how does it actually look?"

Equity in College Preparation—College & Career Readiness Indicator

Figure 1. Percentage of Students *Prepared* and *Approaching Prepared*, by Subgroup



Equity in College Preparation—College & Career Readiness Indicator

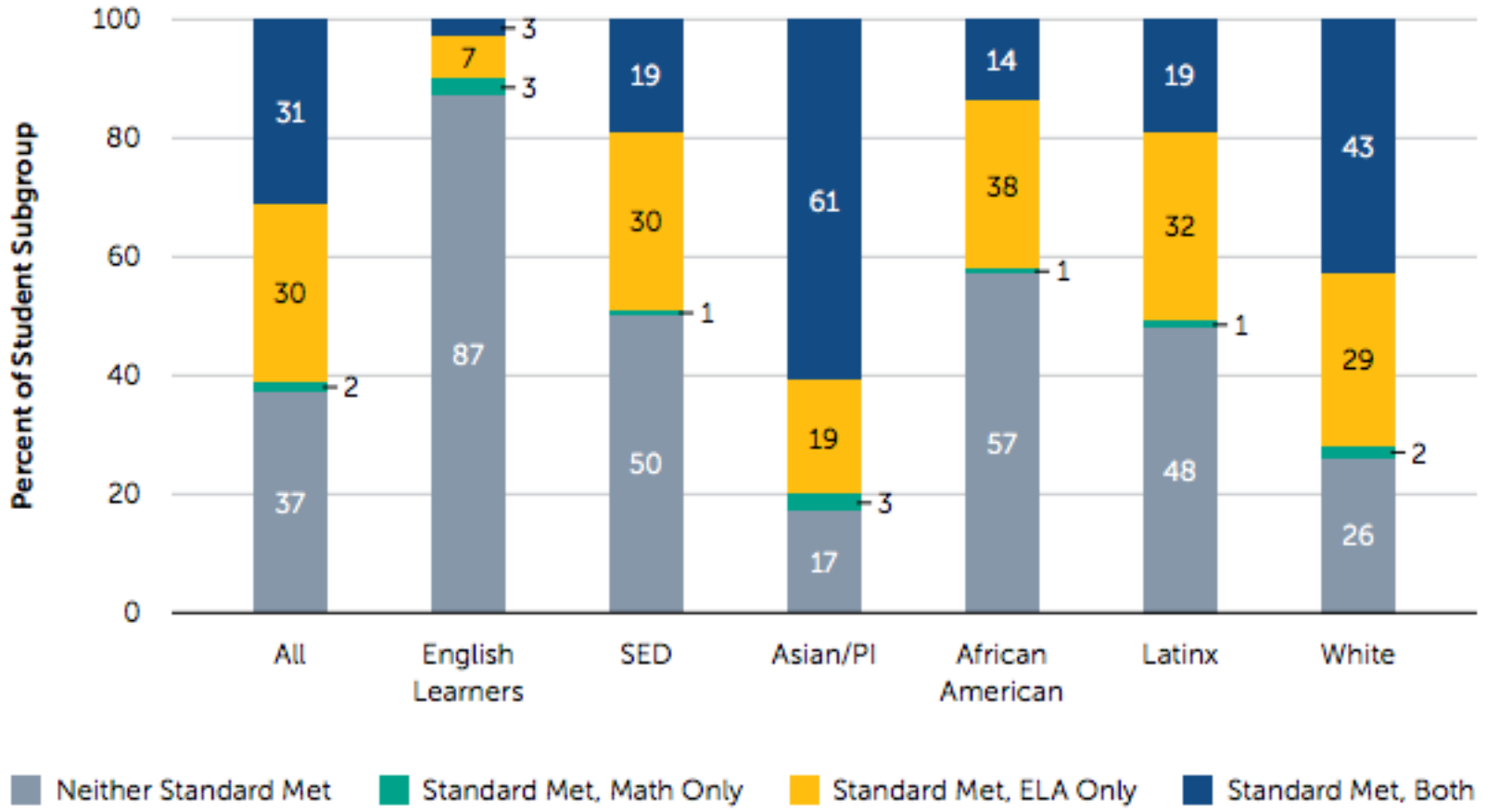
Table 3. Percentage of Students *Prepared* or *Approaching Prepared* on the CCI Pathways, by Subgroup

	All	English Learners	SED	Asian/PI	African American	Latinx	White
Prepared	42	15	34	72	21	34	52
Approaching Prepared	17	17	19	10	19	17	16
Individual Pathways							
SBAC (scores of 3+ in ELA *and* Math)	26	5	17	59	10	16	37
IB (2 exams with score of 4+)	1	0	1	2	0	1	1
AP (2 exams with score of 3+)	14	3	8	42	4	8	20
College Credit (2 semesters C- or better)	4	2	3	4	2	3	5
A-G Completion +1 criteria	34	10	27	63	18	27	42
CTE + 1 criteria	8	3	7	12	4	6	10
State Seal of Biliteracy +SBAC	9	3	8	2	2	9	8
Military Science/Leadership + SBAC	1	0	0	1	0	0	0
Total Number of Students in Subgroup	518,317	73,613	351,486	50,211	34,021	272,753	124,294

Note: Statistics calculated from student-level College/Career Indicator data for the 2017-18 cohort. Analytical sample includes all students statewide. Rates in each pathway calculated based on criteria for *Prepared* in Table 2.

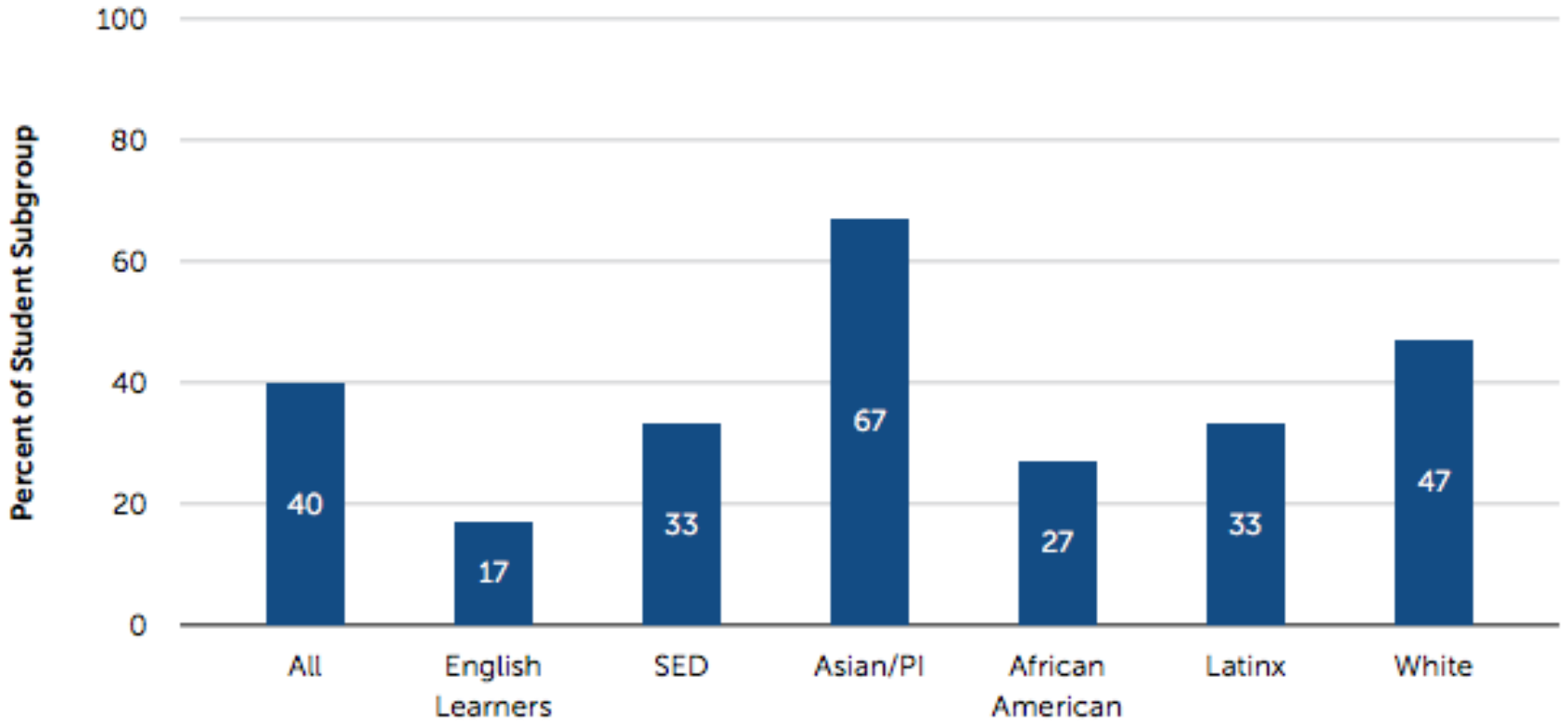
Equity in College and Career Readiness—Assessment Performance

Figure 3. Student Performance on the 11th Grade Smarter Balanced Assessments, by Subgroup



Equity in College Preparation—A-G Coursework

Figure 5. Percentage of Students Successfully Completing A-G Coursework, by Subgroup



Note: Statistics calculated from student-level College/Career Indicator data for the 2017-18 cohort using only the A-G completion indicator. Analytical sample includes all students statewide.

A Leg Up on College

The Scale and Distribution of Community College Participation Among California High School Students

By Elizabeth Friedmann, Michal Kurlaender, Alice Li, and Russell Rumberger

An Effective Onramp, But Not Open to All

Research shows that dual enrollment—a practice in which high school students take college courses while they are still in high school—has multiple benefits for students, high schools and colleges. Researchers found that California high school students take college courses at a rate higher than the national average. But there are significant differences in college course-taking by race and socioeconomic status. Access to dual enrollment, an important on-ramp to college and its benefits, is not equal.

12.6%

of California high schoolers take community college courses

82%

of California high schools have *no* students enrolled in community college courses

Research Brief
Volume 5, Number 1
January 2020

Wheelhouse
The Center for Community College Leadership and Research

PACE
Policy Analysis for California Education

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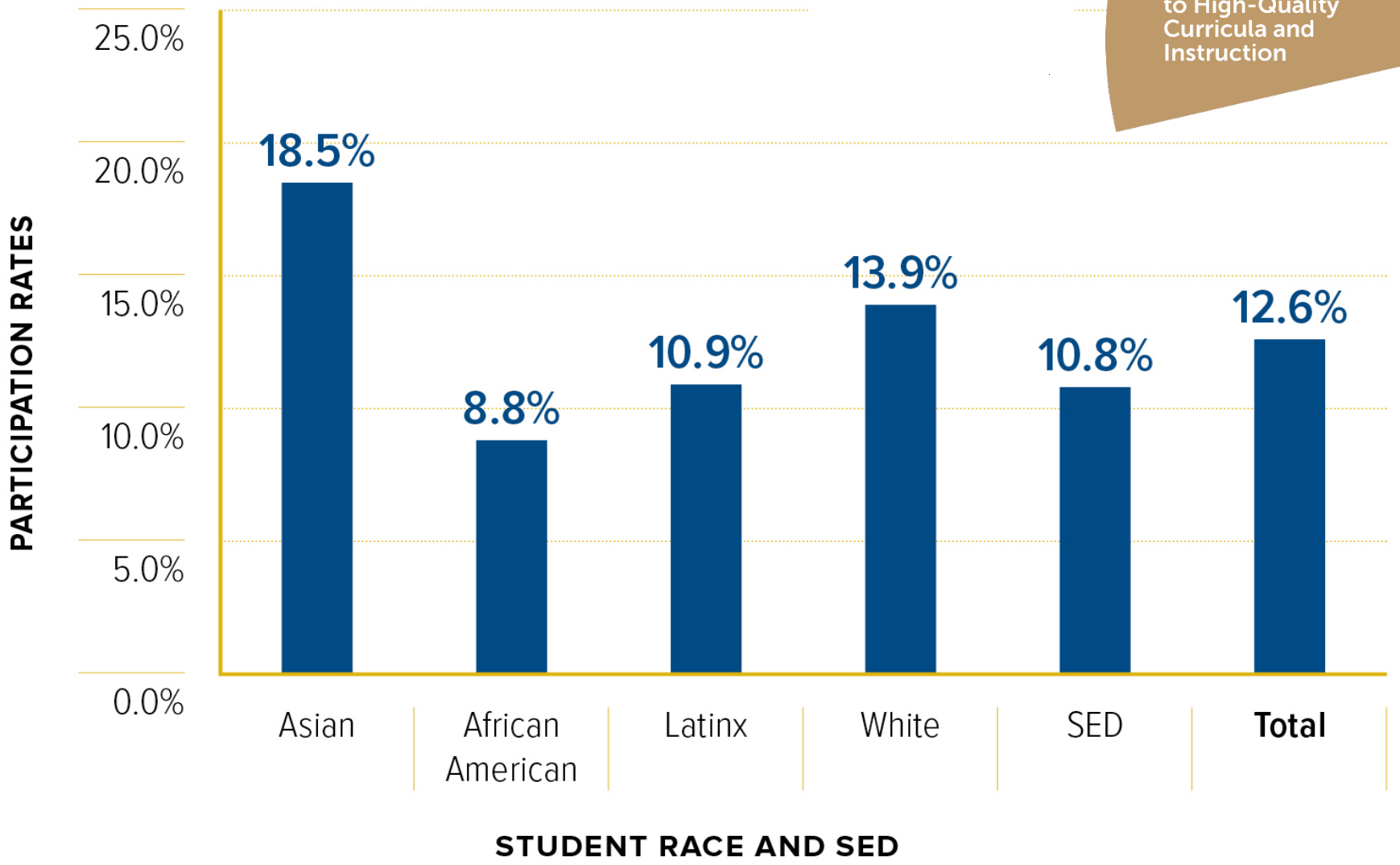
11: Disparities in Access to and Enrollment in Rigorous Coursework.

Equitable Access to High-Quality Curricula and Instruction



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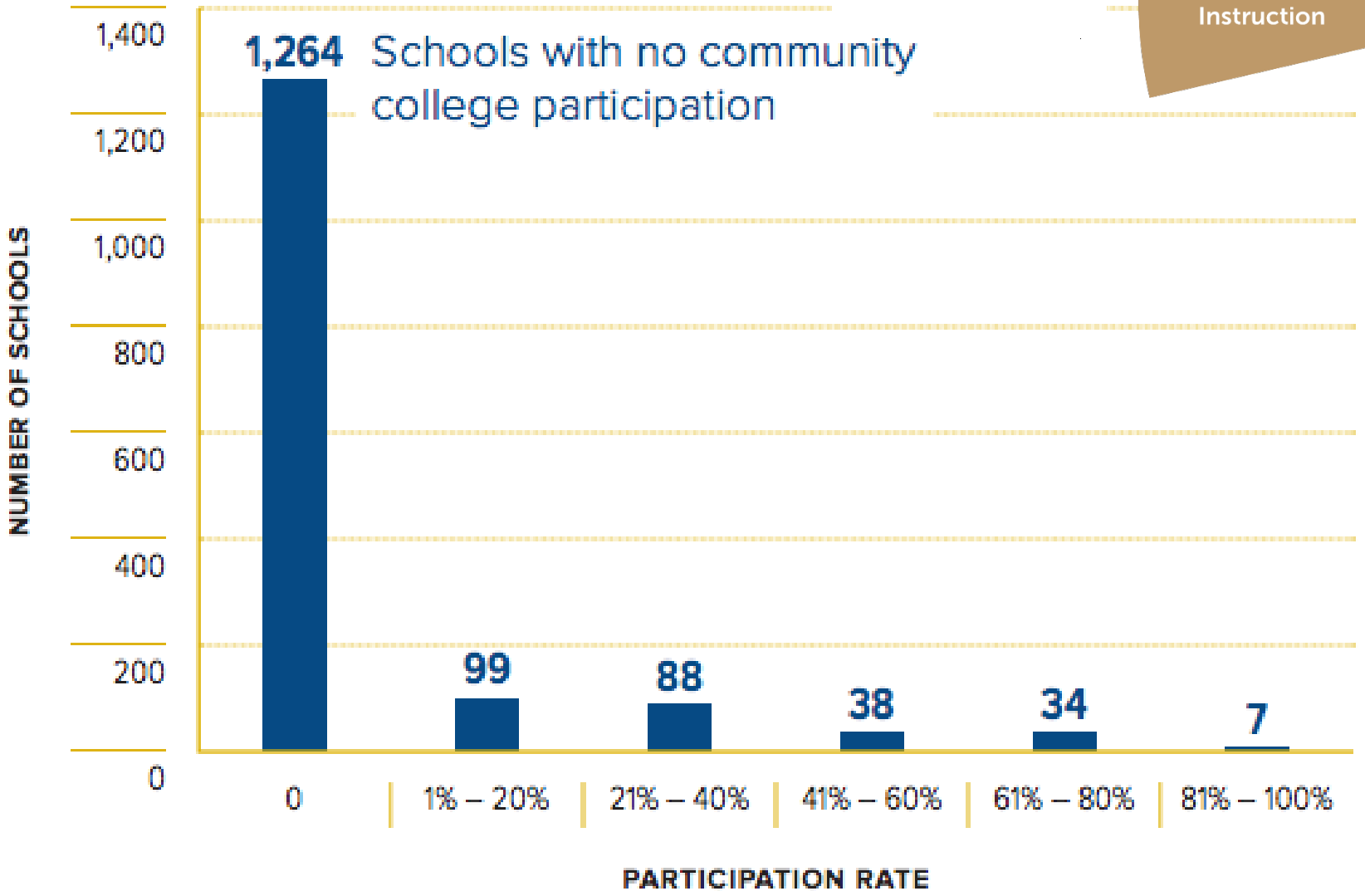

Evidence to Support the Development of Equity Indicators from other recent *Getting Down to Facts II* & PACE publications

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April 3, 2020

Heather Hough

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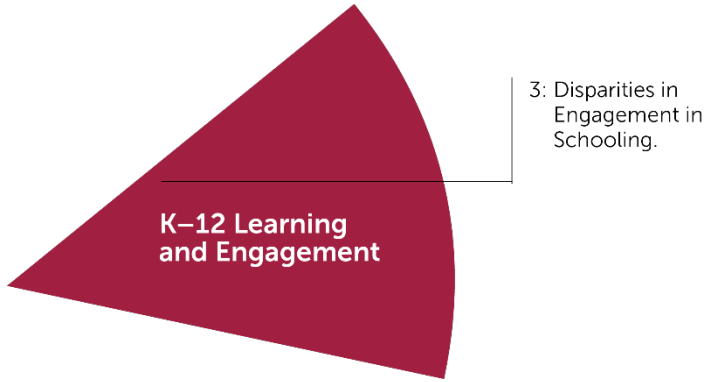
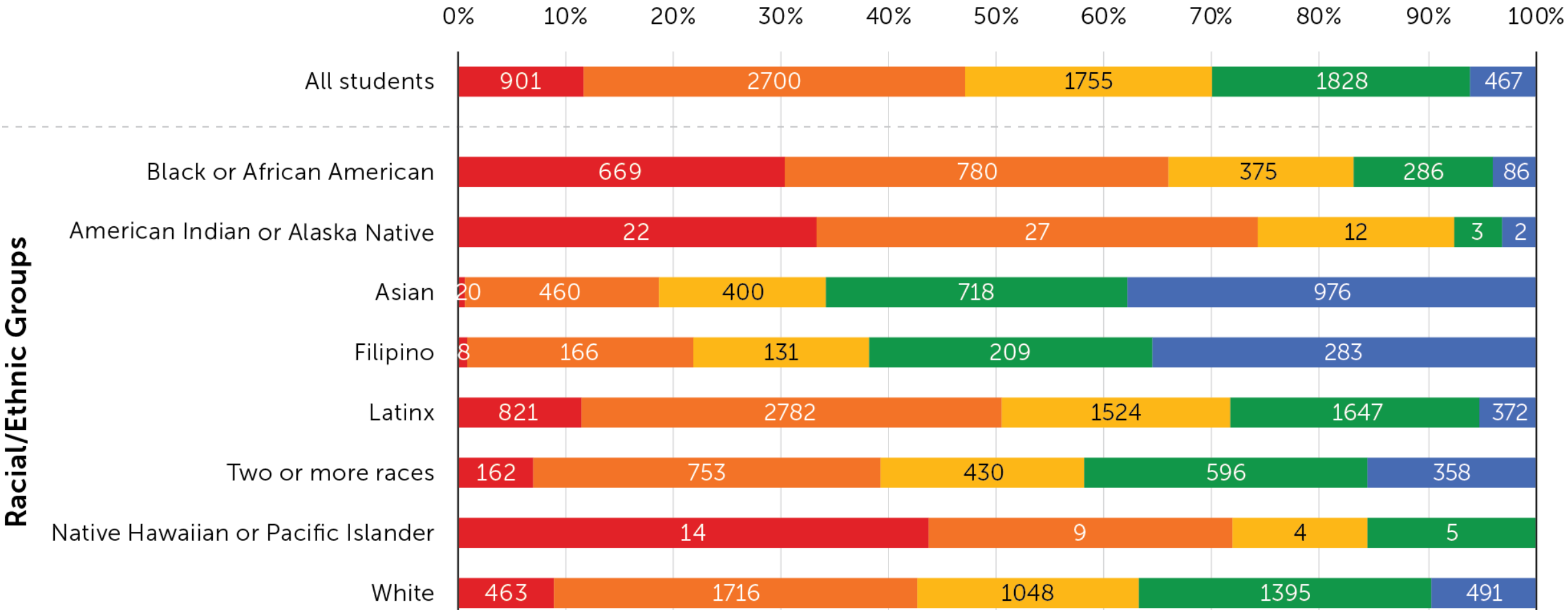
Policy Analysis for California Education

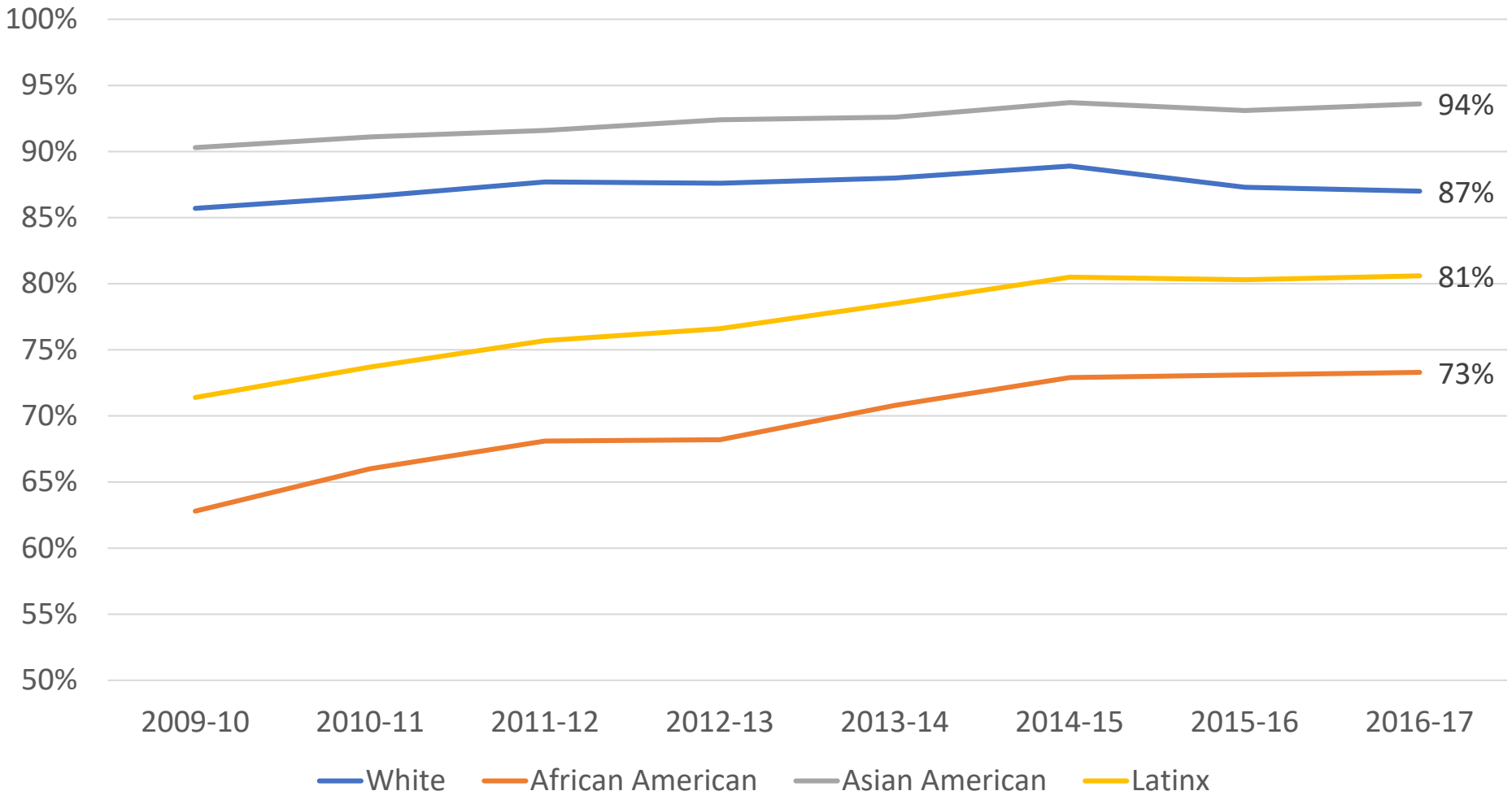
Figure 2. Student Groups by Chronic Absence Performance Levels (Schools)





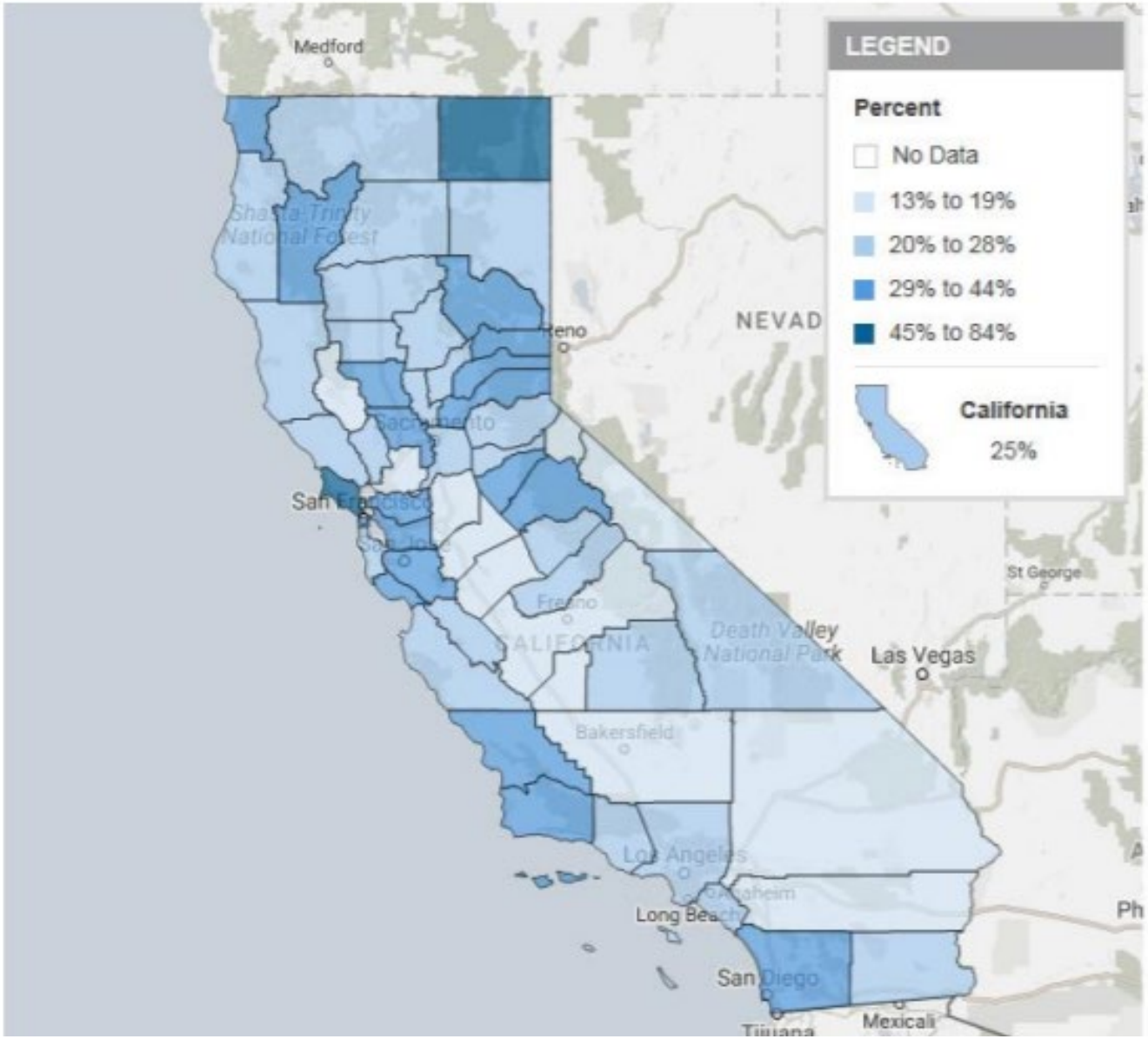
https://edpolicyinca.org/publications/chronic-absence-dashboard

California Cohort Graduation Rates by Ethnicity



https://edpolicyinca.org/publications/what-californias-high-school-graduation-rate

Figure 7. Availability of Licensed Child Care for Working Parents: 2014

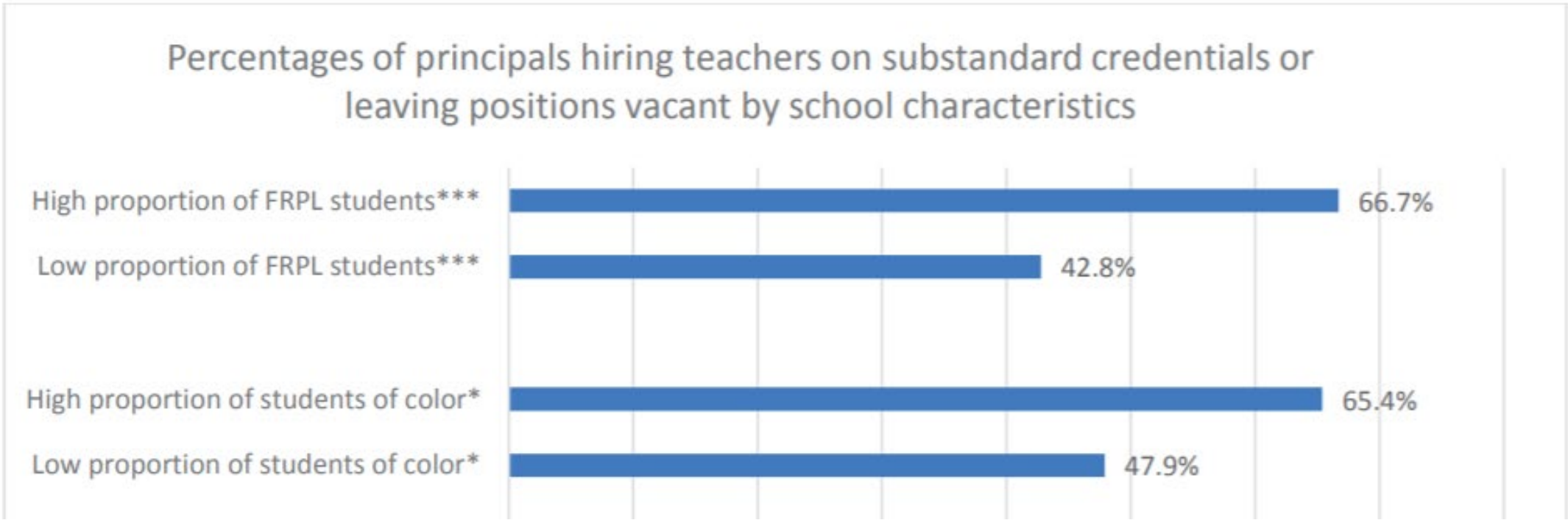


https://gettingdowntofacts.com/publications/early-childhood-education-california

Equitable Access to High-Quality Early Childhood Education

9: Disparities in Access to and Participation in High-Quality Early Childhood Education.

Figure 12: Shortages Disproportionately Impact Schools Serving Historically Disadvantaged Students



https://gettingdowntofacts.com/publications/teacher-shortages-california-status-sources-and-potential-solutions

Table 1. California Proportion of Racial/Ethnic Group with IEP by Test Score Decile (N = 8,540 Students)

Test Score	Whites	African Americans	Latinx	Asian Americans
Lowest 10 percent	.54	.49	.38 **	.43
	.20	.12	.07 ***	.12
	.15	.02 **	.04 ***	.00 *
	.06	.05	.02 *	.07
Middle 50 percent	.06	.03	.02 **	.00 +
	.05	.07	.02 *	.02
	.05	.00 +	.01 ***	.04
	.05	.02	.01 **	.02
	.02	00	.03	.00
Highest 10 percent	.01	00	.00	.01

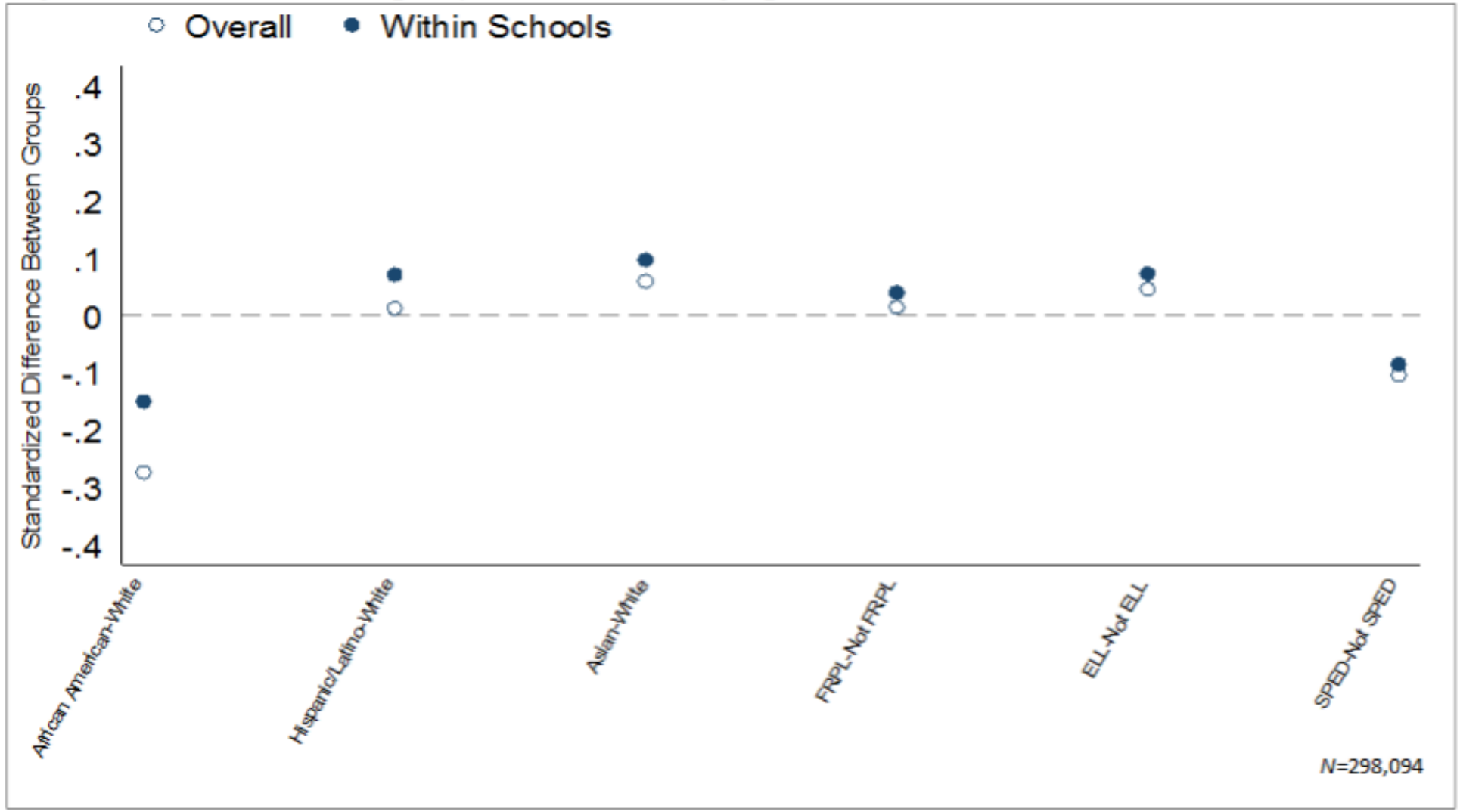
Note. Significance levels based on difference of proportions Z tests in which each race/ethnic group is compared to Whites in the same test score decile. +$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Source. Author's calculation from 2013 NAEP data (nationsreportcard.gov), restricted to California.

https://edpolicyinca.org/publications/achievement-gaps-and-MTSS

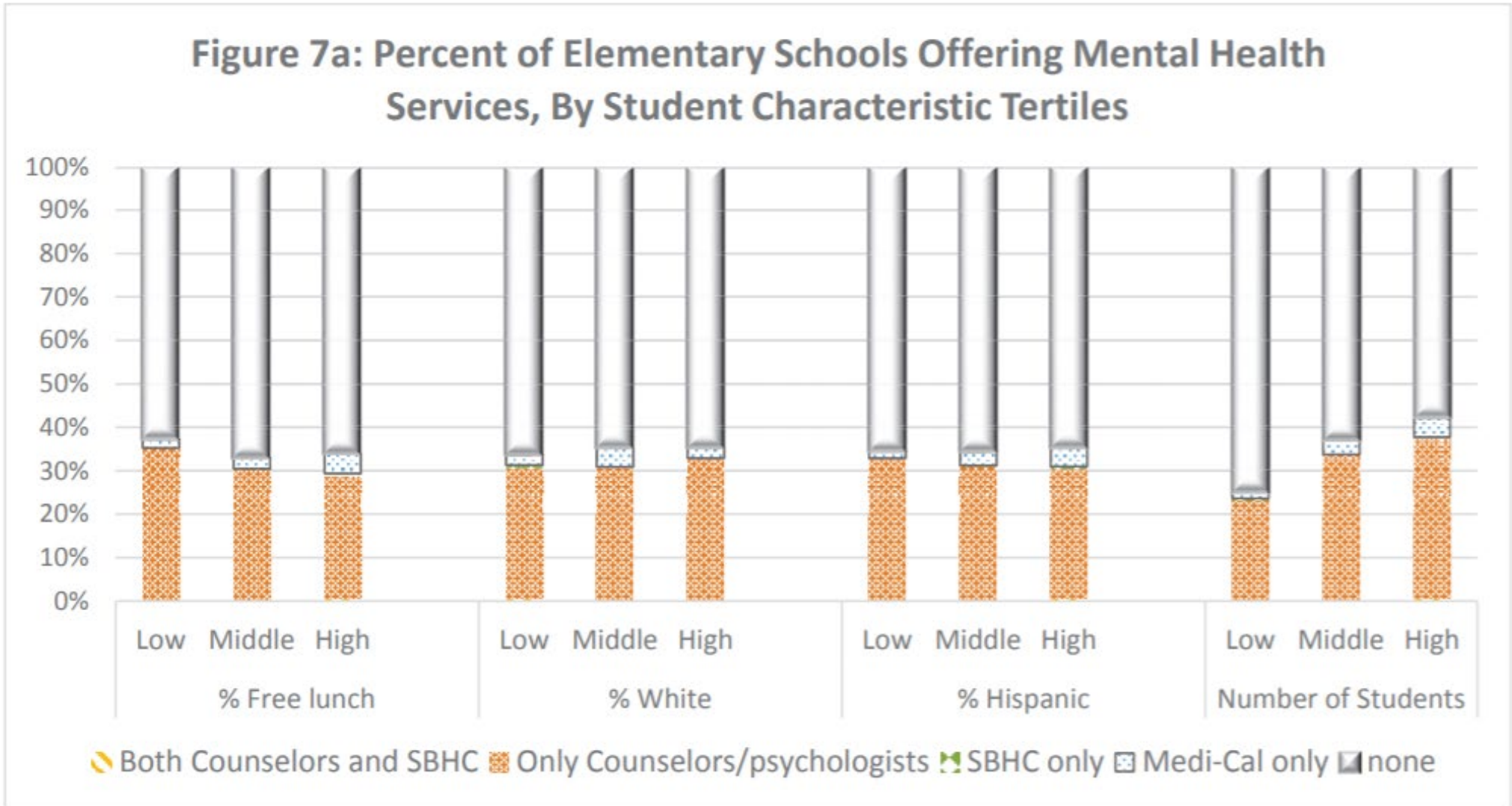
Equitable Access to Supportive School and Classroom Environments

Figure 4. Student CC Gaps by Student Demographics, Overall vs. Within Schools



https://edpolicyinca.org/publications/using-surveys-students-social-emotional-skills-and-school-climate-accountability-and

Figure 7a. Percent of elementary schools offering mental health services, by student characteristic tertiles



https://gettingdowntofacts.com/publications/investments-student-health-and-mental-health-californias-public-schools

Discussion, Recommendations & Next Steps

Q&A