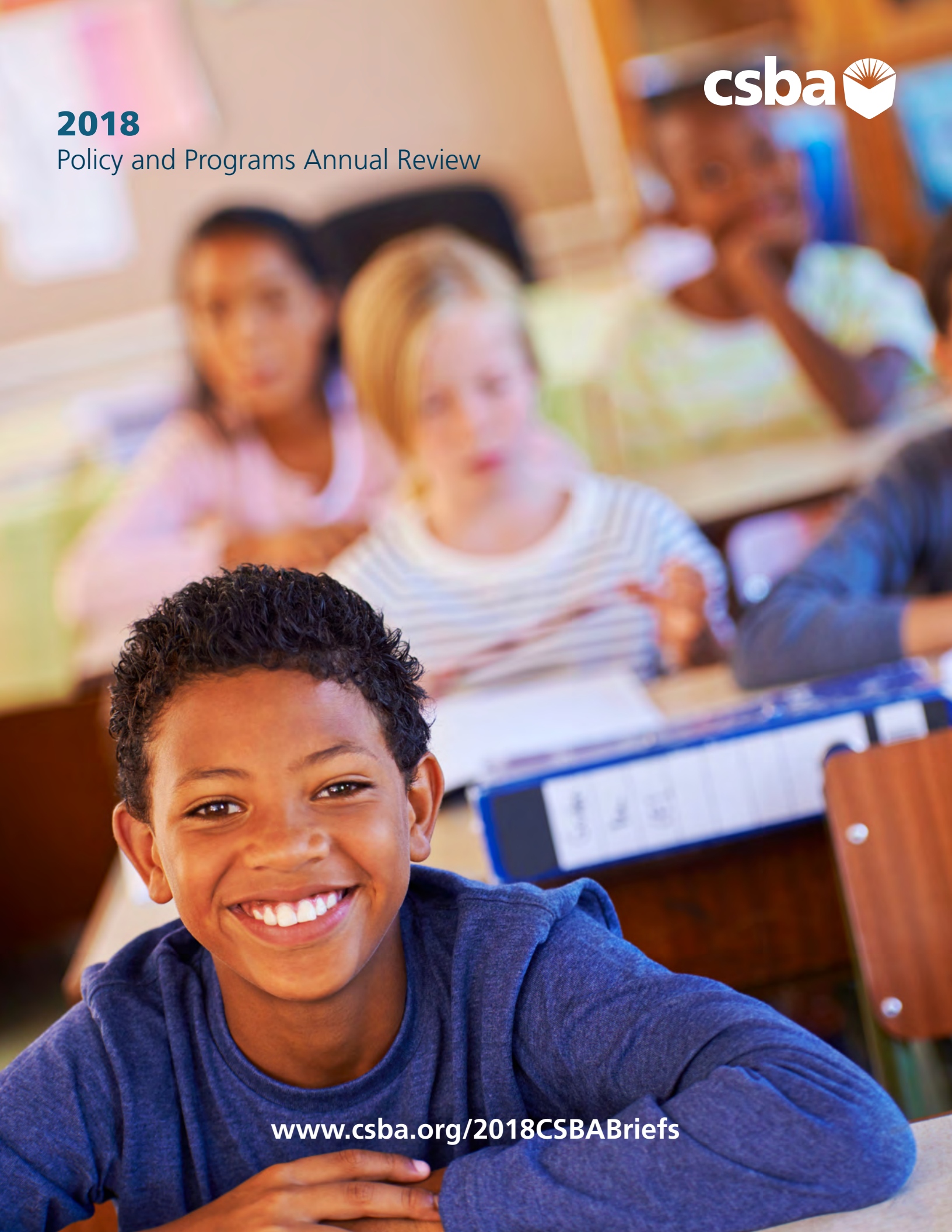


**2018**

Policy and Programs Annual Review

A young boy with dark, curly hair and a bright smile is the central focus of the image. He is wearing a blue hoodie and is sitting at a desk. In the background, other students are seated at desks, but they are out of focus. The setting is a bright, well-lit classroom.

[www.csba.org/2018CSBABriefs](http://www.csba.org/2018CSBABriefs)

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## **Student Achievement:**

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May 2018

# Governance Brief

## Asian, Filipino, and Pacific Islander Students in Focus

by Manuel Buenrostro

The Asian, Filipino, and Pacific Islander communities are an important part of California's cultural fabric and include people from many cultures and experiences. Considering a range of data on these diverse student populations is essential to support efforts to make K-12 public education more effective and equitable.

This brief summarizes key demographic and achievement data as part of an effort to highlight the opportunities and challenges facing Asian, Filipino, and Pacific Islander students. School district and county board members can use this information to better understand the diversity of these students in their schools and identify strategies to support them.

### Importance of Reviewing Disaggregated Data

While this brief presents an overview of statewide results, more specific data is available within each county, district, and school. California law requires state agencies, boards, and commissions to collect data for at least 11 groups, including Chinese, Japanese, Filipino, Korean, Vietnamese, Asian Indian, Laotian, Cambodian, Hawaiian, Guamanian, and Samoan.<sup>1</sup> The California Longitudinal Pupil Achievement Data System (CALPADS) collects data for these 11 student groups, in addition to Hmong, Other Asian, Tahitian, and Other Pacific Islander students.

A local review of this data is critical to ensure that all Asian, Filipino, and Pacific Islander students receive the educational supports and resources that they need. Moreover, a more detailed analysis of data from each county, district, and school can help board members and other education leaders to make more informed decisions about how to best serve their communities and students, including in

### In this brief you will find:

- » **Information about the importance of analyzing local data and disaggregating it further so that the needs of student groups are not hidden.**
- » **An overview of the enrollment trends of Asian, Filipino, and Pacific Islander students.**
- » **An analysis of their enrollment and concentration by county and Local Educational Agency (LEA).**
- » **Information about their demographics, including socioeconomic, English learner, and special education status.**
- » **A summary of their outcomes, including academic achievement, attendance, and high school graduation rates.**

the development of their Local Control and Accountability Plans (LCAPs).

### Enrollment Trends

Of the 6.2 million K-12 students who attend California public schools, 9.2 percent are Asian, 2.4 percent are Filipino, and 0.5 percent are Pacific Islander. These populations are composed of students from many cultural backgrounds:

- » 569,744 are Asian, including Asian Indian, Cambodian, Chinese, Hmong, Japanese, Korean, Laotian, and Vietnamese students;
- » 151,650 are Filipino; and
- » 28,920 are Pacific Islander, including Guamanian, Hawaiian, Samoan, and Tahitian students.<sup>2</sup>

Data from the 1997–98 to the 2017–18 school years shows different trends for Asian, Filipino, and Pacific Islander students:

- » California’s Asian student population has experienced slow but consistent growth, both in total numbers and percentage of all students. Over the 20-year period, the proportion of Asian students has increased from 8.1 percent to 9.2 percent, and their total population has grown by over 100,000 students (from 466,399 to 569,744 students).
- » The proportion of Filipino students has remained at or near 2.5 percent over the past 20 years. The enrollment of Filipino students in California public schools reached its height during the 2008–09 school year (at 168,112 students) and has since declined to its current enrollment of 151,650 students during the 2017–18 school year.
- » Enrollment of Pacific Islander students was relatively stable in both proportion and number of students in the early to late 2000s (from the 2000–01 to the 2008–09 school years), making up approximately 0.6 percent of all students, with enrollment hovering around 40,000 students. However, their enrollment has since steadily declined to 28,920 students during the 2017–18 school year (their lowest recorded enrollment over the past 20 years). Pacific Islander students have made up 0.5 percent of all students over the past six years.<sup>3</sup>

## Enrollment by County and LEA

While Asian, Filipino, and Pacific Islander students attend school in 57 of 58 California counties, their concentration varies considerably by county—ranging from 0.5 percent (two students) in Sierra County to 36 percent in San Francisco County (Alpine County has none). Ten counties have an Asian, Filipino, and Pacific Islander student enrollment that is above the statewide average (12.1 percent), while 38 counties have an enrollment at or below 6 percent (half of the statewide average).<sup>6</sup> A list of all counties arrayed by percentage of Asian, Filipino, and Pacific Islander students can be found [here](#).

The concentration of Asian, Filipino, and Pacific Islander students also varies considerably at the LEA level (which

## Growth of Asian Population Nationally and in California

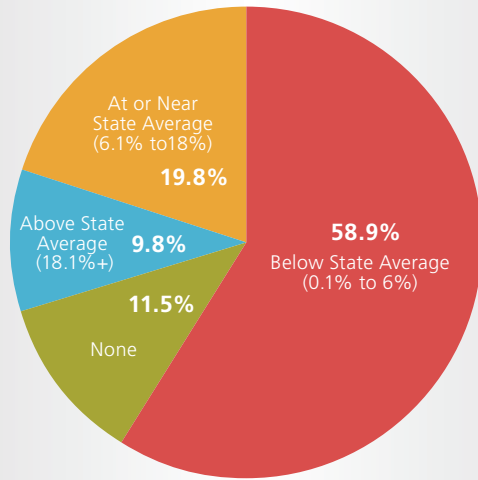
Nationwide, the Asian population has been increasing, including the numbers of Asian students in our public schools. According to the Pew Research Center, “the U.S. Asian population grew by 72% from 2000 to 2015 (from 11.9 million to 20.4 million), the fastest growth rate of any major racial or ethnic group.” Across the 19 groups in the analysis, about half nearly doubled in size, with Bhutanese, Nepalese, and Burmese populations showing the fastest growth. Looking at the overall U.S. Asian population, no single group makes up a majority, but the largest groups include those of Chinese origin (24 percent), Indian origin (20 percent), and Filipinos (19 percent). About one third of all U.S. Asians live in California.<sup>4</sup>

According to the Public Policy Institute of California, the majority (53 percent) of immigrants arriving in California between 2011 and 2015 came from Asia, including sizable populations from China (914,000), the Philippines (859,000), India (581,000), and Vietnam (507,000). Overall, 39 percent of all California immigrants were born in Asia. This has implications for public schools, especially when we consider that half of California’s children have at least one immigrant parent.<sup>5</sup>

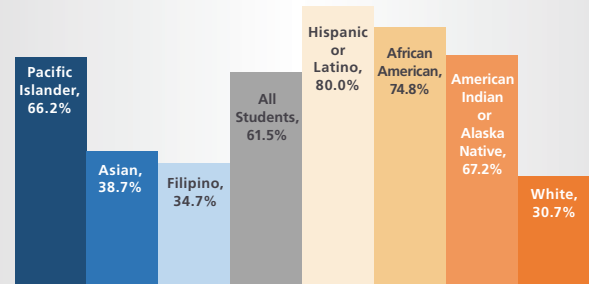
includes school districts, charter schools, county offices of education, and state special schools). About 11.5 percent of California LEAs have no Asian, Filipino, or Pacific Islander students; 58.9 percent have significantly fewer than the state average; 19.8 percent meet or are near the state average;<sup>7</sup> and just 9.8 percent have significantly more than the state average. A list of all LEAs by percentage of Asian, Filipino, and Pacific Islander students can be found [here](#).

The majority of Asian, Filipino, and Pacific Islander students in the state attend school in just 37 school districts. This makes them more concentrated than White and Latino students (over half are enrolled in 82 and 58 school districts, respectively), but less than African-American students (over half are enrolled in 22 school districts).<sup>8</sup>

**Figure 1. 2017-18 Enrollment of Asian, Filipino, and Pacific Islander Students by LEA**



**Figure 2. 2017-18 Percentage of Socioeconomically Disadvantaged Students, by Ethnicity**



## Socioeconomic, Language, and Special Education Status

When looking at specific demographics of Asian, Filipino, and Pacific Islander students, there are multiple factors that impact their educational attainment. These include their socioeconomic, English learner, and special education status.

### Socioeconomic Status

Only slightly over one third of Asian and Filipino students are socioeconomically disadvantaged—well below the state average of 61.5 percent. In contrast, 66.2 percent of Pacific Islander students are socioeconomically disadvantaged.<sup>9</sup> Given the diverse background of these students, averages can hide significant differences. For example, there are populations included in the Asian group (such as Hmong, Cambodian, and Laotian) and the Pacific Islander group (such as Tongan and Samoan) who have among the lowest per capita income, and highest poverty and unemployment rates in California.<sup>10</sup>

### Language Status

Many Asian, Filipino, and Pacific Islander students also come from households where a language other than English is spoken at home. Vietnamese, Mandarin (Putonghua), and Filipino (Pilipino or Tagalog) are among the home languages of these students.<sup>11</sup> While bilingualism is an asset in college, career, and life, it also means that students and families might need extra instruction and services that can allow them to fully participate in school. A list of all languages spoken at home by students can be found [here](#).

In the 2017–18 school year, 23.5 percent of Asian, 10.9 percent of Filipino, and 13.9 percent of Pacific Islander students were English learners—and many others are former English learners. The proportion of students who are English learners is greater for those in the earlier grades:

- » 46.7 percent of first-grade Asian students are English learners, compared to 17.7 percent in sixth grade and 11.8 percent in ninth grade;
- » 18.4 percent of first-grade Filipino students are English learners, compared to 10 percent in sixth grade and 6.9 percent in ninth grade; and
- » 19.4 percent of first-grade Pacific Islander students are English learners, compared to 13.9 percent in sixth grade and 9.2 percent in ninth grade.<sup>12</sup>

### Other Important Student Characteristics

**Homeless students.** Of the state's 204,085 homeless students, 3 percent are Asian (6,036), 1.6 percent are Filipino (3,166), and 0.6 percent are Pacific Islander students (1,281). A lower proportion of Asian and Filipino students, and a higher proportion of Pacific Islander students are homeless, compared to the overall student population.<sup>14</sup>

**Foster youth.** Of the state's 34,426 foster youth, 1 percent are Asian (340), 0.5 percent are Filipino (167), and 0.4 percent are Pacific Islander (146). A lower proportion of Asian, Filipino, and Pacific Islander students are identified as foster youth compared to the overall student population.<sup>15</sup>

**Migrant students.** Of the state's 48,636 migrant students, 1.2 percent are Asian (580), 0.1 percent are Filipino (41), and only two students are Pacific Islander. A higher proportion of Asian, and a smaller proportion of Filipino and Pacific Islander students are migrant, compared to the overall student population. However, their overall numbers and percentage are small when considering that 98 percent of migrant students are Latino.<sup>16</sup>

### Special Education Status

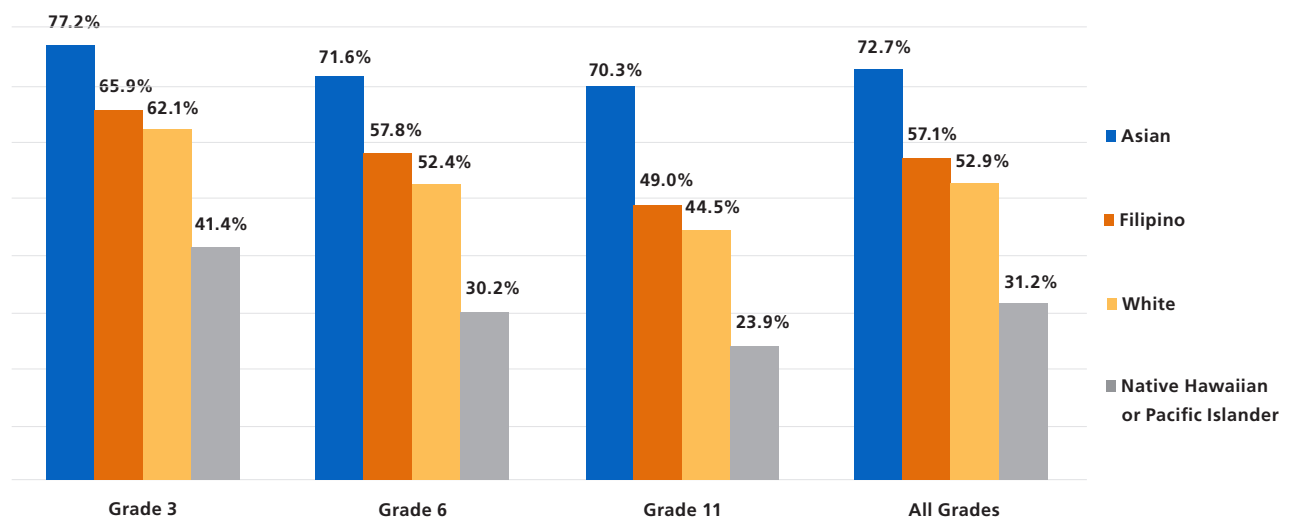
Within special education programs, Asian, Filipino, and Pacific Islander students are identified at considerably lower rates than students from all other student groups. While 11.3 percent of all students are identified for special education services, only 5.8 percent of Asian, 7.1 percent of Filipino, and 9 percent of Pacific Islander students are identified.<sup>13</sup>

### Academic Achievement

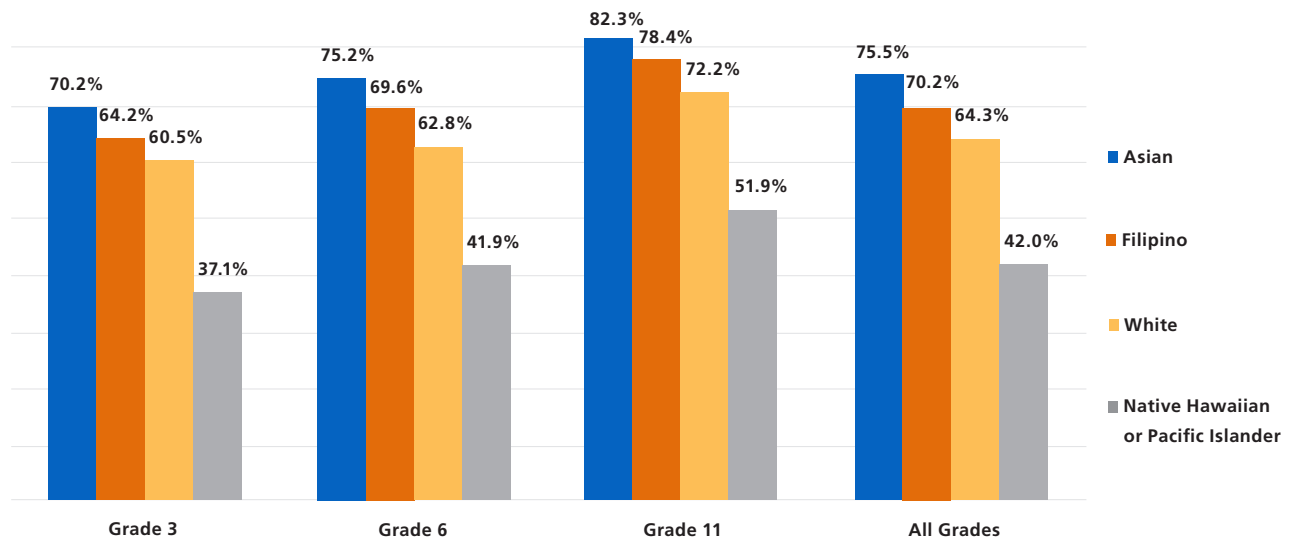
Looking at the 2016–17 California Assessment of Student Performance and Progress (CAASPP) results in math and English language arts, we see significant differences in the achievement levels of Asian, Filipino, and Native Hawaiian or Pacific Islander students (CAASPP reports data on “Native Hawaiian or Pacific Islander students,” while enrollment data from the California Department of Education reports on “Pacific Islander students,” which includes Native Hawaiian students).

In math, Asian students score higher than any other group: 72.7 percent of Asian students met or exceeded grade-level standards, compared to 57.1 percent of Filipino, and 31.2 percent of Native Hawaiian or Pacific Islander students.

**Figure 3. 2016–17 CAASPP Math Percent of Asian, Filipino, or Native Hawaiian or Pacific Islander Students that Met or Exceeded Standards**



**Figure 4. 2016–17 CAASPP English Language Arts Percent of Asian, Filipino, or Native Hawaiian or Pacific Islander Students that Met or Exceeded Standards**



### Hidden Gaps

Achievement data should be analyzed with caution, as averages for Asian or Pacific Islander students can mask the academic needs of some students within these groups. For example, while the achievement of Asian students is high overall, these students include Cambodian, Laotian, and Hmong students, whose achievement scores are often lower. It is essential that local leaders disaggregate their local data for all of their student populations in order to understand and meet their needs.

The California State University and many community colleges have been using 11th-grade math and English language arts standardized test scores to indicate college readiness for a number of years and going forward, 11th-grade CAASPP scores will be included in the college and career readiness index as part of the California School Dashboard. Given this approach, 11th-grade results suggest that only 23.9 percent of Native Hawaiian or Pacific Islander students are ready or conditionally ready for college-level work in math, compared to 49 percent of Filipino and 70.3 percent of Asian students.<sup>17</sup>

Asian students overall also score higher than any other group in English language arts: 75.5 percent of Asian students met or exceeded grade-level standards, compared to 70.2 percent of Filipino, and 42 percent of Native Hawaiian or Pacific Islander students. Based on 11th-grade results, 51.9 percent of Native Hawaiian or Pacific Islander students are ready or conditionally ready for college-level English language arts coursework, compared to 78.4 percent of Filipino and 82.3 percent of Asian students.<sup>18</sup>

### Suspensions, Expulsions, and Attendance

Keeping all students in school is critical to their achieving a quality education. In meeting this goal, county offices, school districts, and schools should consider data on student attendance and the types of students affected by disciplinary practices. Information on suspensions, expulsions, chronic absenteeism, and high school dropout rates is critical to understanding the level of connectedness that Asian, Filipino, and Pacific Islander students have to their schools.

- » **Suspensions.** Compared to the suspension rate for all students (3.6 percent), Asian and Filipino students have considerably lower suspension rates (1.1 percent and 1.4 percent respectively). Moreover, among the



students suspended that are Asian and Filipino, only one in five face multiple suspensions, compared to nearly one in three for all students. However, the suspension rate for Pacific Islander students is significantly higher (5 percent), than the rate for all students and is only surpassed by that of African-American (9.8 percent) and American Indian or Alaska Native (7.4 percent) students.<sup>19</sup>

- » **Expulsions.** Expulsions are less common and are considerably lower for Asian (0.02 percent) and Filipino (0.04 percent) students when compared to that of all other student groups. The rate for Pacific Islander students, although slightly higher (0.08 percent), is also relatively low and falls below the average for all students (0.09 percent).<sup>20</sup>
- » **Chronic absenteeism.** When looking at the proportion of students who are chronically absent (those that are absent for 10 percent or more of the days they are expected to attend), the rate for Asian (3.6 percent) and Filipino (5 percent) students is significantly lower than the average of all students and all other student groups (10.8 percent). Pacific Islander students have among the highest rate of chronic absenteeism (15.5 percent), a rate that is greater than the statewide average, and is only surpassed by that of African-American (18.8 percent) and American Indian or Alaska Native (20.9 percent) students.<sup>21</sup>

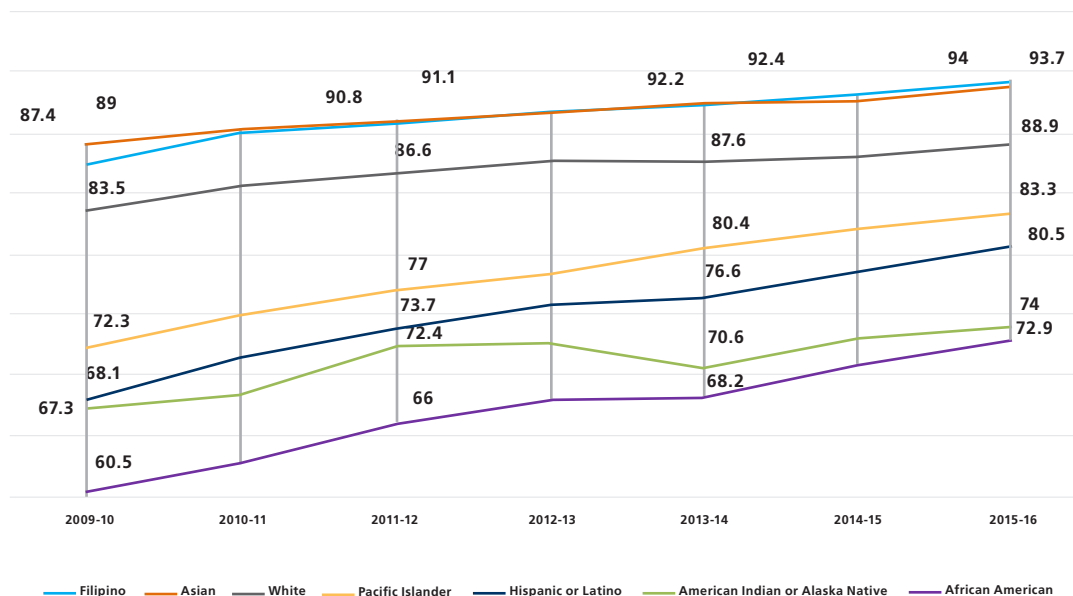
- » **High school dropout rates.** Asian and Filipino students have the lowest high school dropout rates (0.6 and 0.7 percent, respectively), of any student group. The dropout rate for Pacific Islander students (2.3 percent) is higher than that of white students (1.3 percent) but near the average for all students (2.4 percent).<sup>22</sup>

## High School Graduation Rates

According to 2015–16 four-year cohort graduation data, 93.7 percent of Asian students graduated from high school, compared to 94 percent of Filipino, and 83.3 percent of Pacific Islander students. For all student groups, cohort graduation rates have improved since the 2009–10 school year, with the gap closing slightly between all ethnic student groups (see Figure 5).<sup>23</sup>

Readiness for entrance and success in a University of California (UC) or California State University (CSU) is a critical measure of student success. Unfortunately, not all high school graduates have completed the A-G coursework requirements necessary for entrance to a UC or CSU campus. According to the most recent 2016–17 data, only 38.4 percent of Pacific Islander students graduated from high school having completed their A-G requirements. And while a higher proportion of Asian (73.5 percent) and Filipino (64.5 percent) students graduated

**Figure 5. Cohort Graduation Rates for the 2009–10 to 2015–16 Classes**



from high school meeting these requirements—higher than any other student group—these numbers are still lower than their overall high school graduation rates.<sup>24</sup>

## Conclusion

This brief is part of CSBA's continued effort to shed light on California's diverse student population. As Asian, Filipino, and Pacific Islander students continue to contribute to the Golden State's cultural fabric, it is critical for governing boards to understand the backgrounds, contributions, and challenges of these students in order to provide them with the necessary supports to meet their potential. CSBA will continue to produce additional briefs, fact sheets, and articles to highlight research-supported strategies and recommendations for board members to consider.

## Resources

Sample policies and administrative regulations are available to subscribers of CSBA's policy services through Gamut Online at <https://bit.ly/2jM5Ntz>. These include:

- » BP/AR 6146.1 - High School Graduation Requirements
- » BP/AR 6164.4 - Identification And Evaluation Of Individuals For Special Education
- » BP/AR 6173 - Education For Homeless Children
- » BP/AR 6173.1 - Education For Foster Youth
- » BP/AR 6174 - Education For English Learners
- » BP/AR 6175 - Migrant Education Program

## Endnotes

- 1 Government Code 8310.5. Retrieved from <https://bit.ly/2H2fMYB>
- 2 CSBA Analysis: California Department of Education, DataQuest. 2017–18 enrollment by ethnicity, statewide report. Downloaded May 8, 2018, from <https://bit.ly/2runvWt>
- 3 CSBA Analysis: California Department of Education, DataQuest. Selected statewide data for the year 1997–98, 1998–99, 1999–2000, 2000–01, 2001–02, 2002–03, 2003–04, 2004–05, 2005–06, 2006–07, 2007–08, 2008–09, 2009–10, 2010–11, 2011–12, 2012–13, 2013–14, 2014–15, 2015–16, 2016–17, and 2017–18. Downloaded May 8, 2018, from <https://bit.ly/2jFV0ke>
- 4 López, G., Ruiz, N. G., Patten, E. (2017). *Key facts about Asian Americans, a diverse and growing population*. Washington, DC: Pew Research Center. Retrieved from <https://pewrsr.ch/2gNTFGc>
- 5 Hayes, J. (2017). *Just the Facts: Immigrants in California*. Public Policy Institute of California. Retrieved from <https://bit.ly/2GIHzdr>
- 6 See endnote 2.

- 7 CSBA Analysis: California Department of Education, DataQuest. Enrollment in California public schools by ethnic designation, 2017–18. Downloaded May 7, 2018, from <https://bit.ly/2rs0WBb>
- 8 See endnote 7.
- 9 See endnote 2.
- 10 Tseng, W., McDonnell, D. D., Takahashi, L., Ho, W., Lee, C., and Wong, S. (2012). *Ethnic health assessment for Asian Americans, Native Hawaiians, and Pacific Islanders in California*. San Francisco, CA: Asian & Pacific Islander American Health Forum (APIAHF). Retrieved from <https://bit.ly/2H5CtLT>
- 11 CSBA Analysis: California Department of Education, DataQuest. English learner students by language by grade. Downloaded May 8, 2018, from <https://bit.ly/215EeG4>; and California Department of Education, DataQuest. Fluent-English-proficient students by language by grade. Downloaded May 8, 2018, from <https://bit.ly/2KLOoim>
- 12 CSBA Analysis: California Department of Education, DataQuest. 2017–18 enrollment by ethnicity and grade. Downloaded May 8, 2018 from <https://bit.ly/2FUWIMY>
- 13 See endnote 2.
- 14 See endnote 2.
- 15 See endnote 2.
- 16 See endnote 2.
- 17 CSBA Analysis: California Assessment of Student Performance and Progress. 2017 California statewide research file. Downloaded October 27, 2017 from <https://bit.ly/2qc6Rte>
- 18 See endnote 17.
- 19 California Department of Education, DataQuest. 2016–17 suspension rate. Downloaded April 12, 2018 from <https://bit.ly/2HzoThy>
- 20 California Department of Education, DataQuest. 2016–17 expulsion rate. Downloaded April 12, 2018 from <https://bit.ly/2Hx2gdF>
- 21 California Department of Education, DataQuest. 2016–17 chronic absenteeism rate. Downloaded April 12, 2018 from <https://bit.ly/2EJG1OE>
- 22 California Department of Education, DataQuest. Dropouts by ethnic designation by grade: 2016–17 state of California. Downloaded April 12, 2018 from <https://bit.ly/2v4SbSk>
- 23 California Department of Education, DataQuest. Cohort outcome summary report by race/ethnicity. Downloaded April 2, 2018, from <https://bit.ly/2G0hWDD>
- 24 California Department of Education, DataQuest. 12th grade graduates completing all courses required for U.C. and/or C.S.U. entrance: State of California 2016-17. Downloaded May 8, 2018, from <https://bit.ly/2FYyTy>

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# FactSheet October 2018

## Latino Students in California's K-12 Public Schools

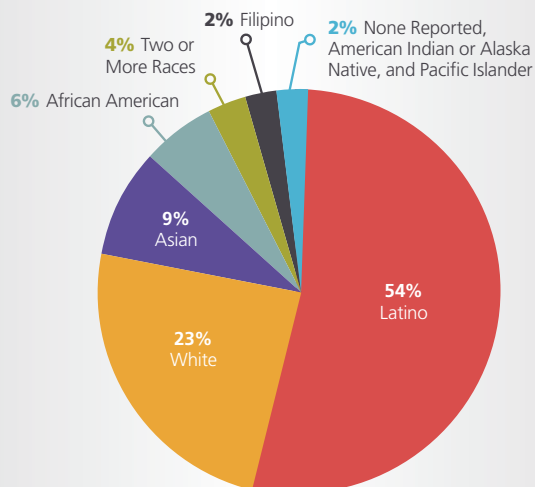
by Manuel Buenrostro

Latinos are an important part of California's cultural fabric and are central to the state's future economic prosperity. Critical to this prosperity is how California's K-12 public schools prepare Latino students for success in college, career, and civic life. This fact sheet summarizes key student characteristic and achievement data as part of an effort to highlight the opportunities and challenges facing Latino students. Additional CSBA briefs offer information about research-supported strategies and recommendations for board members to promote Latino student achievement.

### Enrollment

Of the 6.2 million K-12 students who attend California public schools, just over half—3,376,591 million (54 percent)—are Latino.<sup>1</sup> This student population has grown steadily and has constituted the majority of public school students since the 2009–10 school year.

**Figure I.** 2017-18 California Statewide K-12 Public School Enrollment, by Ethnicity<sup>2</sup>



### In this fact sheet you will find:

- » **An overview of the enrollment trends of Latino students and their enrollment and concentration by county and school district level.**
- » **Information about Latino student characteristics, including socioeconomic, English learner, and special education status.**
- » **A summary of Latino student outcomes, including academic achievement and high school graduation rates.**
- » **Questions for board members to consider.**

While Latino students attend school in all of California's 58 counties, their numbers vary considerably, ranging from 5 percent of students in Alpine County to 92 percent of students in Imperial County. In 22 counties, the majority of students are Latino, while fewer than one-fourth are Latino in 17 counties.<sup>3</sup>

The concentration of Latino students also varies considerably at the school district level. Nearly 40 percent of school districts have a majority Latino student population—and in half of these, 75 percent or more of students are Latino. The largest of these high-concentration Latino school districts (those with 75 percent or more Latino students) is the Santa Ana Unified School District, which enrolls 49,372 students, 93 percent of whom are Latino. To put this in perspective, most high-concentration Latino school districts enroll fewer than 3,000 students.<sup>4</sup>

Table 1. 2017-18 Latino Student Enrollment, by County<sup>5</sup>

County	Latino Enrollment	Total Enrollment	Percent Latino	County	Latino Enrollment	Total Enrollment	Percent Latino
<b>Imperial</b>	34,800	37,716	92%	<b>Solano</b>	24,413	63,481	39%
<b>Monterey</b>	61,593	77,954	79%	<b>Santa Clara</b>	104,429	272,132	38%
<b>Tulare</b>	80,655	104,049	78%	<b>San Mateo</b>	35,771	95,155	38%
<b>Colusa</b>	3,569	4,627	77%	<b>Sutter</b>	8,735	23,690	37%
<b>San Benito</b>	8,341	11,253	74%	<b>Yuba</b>	5,396	14,619	37%
<b>Madera</b>	23,414	31,728	74%	<b>Lake</b>	3,459	9,549	36%
<b>Merced</b>	42,906	58,812	73%	<b>Contra Costa</b>	63,229	178,060	36%
<b>Kings</b>	20,285	29,203	70%	<b>Alameda</b>	77,425	228,356	34%
<b>Santa Barbara</b>	48,344	69,752	69%	<b>Modoc</b>	478	1,411	34%
<b>Fresno</b>	132,755	204,418	65%	<b>San Francisco</b>	18,983	60,898	31%
<b>Kern</b>	123,343	189,949	65%	<b>Sacramento</b>	76,566	245,906	31%
<b>Los Angeles</b>	969,055	1,492,652	65%	<b>Marin</b>	10,005	33,741	30%
<b>San Bernardino</b>	261,777	403,137	65%	<b>Butte</b>	7,595	31,760	24%
<b>Riverside</b>	273,491	428,992	64%	<b>Del Norte</b>	920	4,228	22%
<b>Stanislaus</b>	66,227	109,990	60%	<b>Amador</b>	880	4,147	21%
<b>Ventura</b>	81,099	137,758	59%	<b>El Dorado</b>	5,789	27,875	21%
<b>Glenn</b>	3,234	5,581	58%	<b>Calaveras</b>	1,070	5,461	20%
<b>Santa Cruz</b>	22,580	40,393	56%	<b>Placer</b>	14,471	74,063	20%
<b>Napa</b>	11,320	20,402	56%	<b>Mariposa</b>	353	1,865	19%
<b>San Joaquin</b>	78,002	148,948	52%	<b>Nevada</b>	2,122	11,424	19%
<b>Mono</b>	985	1,890	52%	<b>Humboldt</b>	3,369	18,501	18%
<b>Inyo</b>	2,324	4,497	52%	<b>Lassen</b>	663	3,791	18%
<b>Orange</b>	238,661	485,835	49%	<b>Tuolumne</b>	1,037	6,076	17%
<b>San Diego</b>	244,753	508,169	48%	<b>Siskiyou</b>	997	5,934	17%
<b>Yolo</b>	14,242	30,067	47%	<b>Plumas</b>	341	2,169	16%
<b>Sonoma</b>	32,086	70,449	46%	<b>Shasta</b>	4,093	26,935	15%
<b>Mendocino</b>	5,672	13,203	43%	<b>Sierra</b>	59	407	15%
<b>Tehama</b>	4,421	10,958	40%	<b>Trinity</b>	172	1,584	11%
<b>San Luis Obispo</b>	13,833	34,733	40%	<b>Alpine</b>	4	80	5%

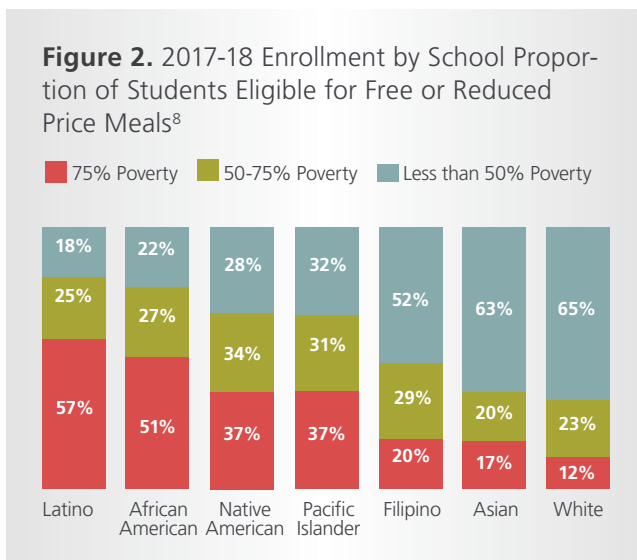
## Student Characteristics

When looking at specific characteristics of Latino students, there are multiple factors that contribute to their educational attainment. Understanding these characteristics in their counties, districts, and schools can help board members better meet the needs of Latino students. All data in this section are from the 2017–18 school year.

### Socioeconomic Status

Latino students are the most socioeconomically disadvantaged student group in California—80 percent of Latino students are socioeconomically disadvantaged, compared to 31 percent of white students and 75 percent of African American students.<sup>6</sup> Socioeconomically disadvantaged students are those for whom neither of their parents received a high school diploma or those who are eligible for the free and reduced-price meals program.

Latinos are more highly concentrated in high-poverty schools than any other student group. These high-poverty schools have less access to resources that create educational opportunity including the most experienced teachers, modern facilities, libraries, and other key resources. Over half (57 percent) of Latino students attend schools where at least 75 percent of students are eligible for the free and reduced-price meals program, which is the most common barometer for measuring poverty among student groups.<sup>7</sup>



## Language Status

Most Latino students come from households where a language other than English is spoken at home. This can be an advantage as bilingualism is an asset that will benefit them in college, career, and life. However, many Latino students are not proficient in English, which affects their academic achievement.

Nearly one in three (31 percent) Latino students are English learners, defined as students whose native language is not English and who need instructional supports to fully access the regular classroom program. The proportion of Latino students who are English learners drops as they move up the grade levels—48 percent of first-grade Latino students are English learners, compared to 29 percent by sixth grade and 19 percent by ninth grade.<sup>9</sup> Addressing the learning needs of these older English learners as well as ensuring that those who have been reclassified continue to achieve requires ongoing attention and expertise. For more resources from CSBA about English learners, visit [bit.ly/2Mg36ku](http://bit.ly/2Mg36ku).

### Students with Disabilities

Students with disabilities have learning or physical differences that may range from minor to severe. Schools provide a vital service by ensuring that all students have the opportunity to meet challenging objectives. In fact, the federal Individuals with Disabilities Education Act (IDEA) requires local educational agencies (LEAs) to identify all students in their jurisdiction who have a disability, and ensure the provision of “resources, adapted instruction, and specialized assistance to mitigate the effects of [their] disability.”<sup>10</sup>

A similar proportion of Latino students are identified as students with disabilities as white students—12 percent of Latinos compared to 11 percent of their white peers. By comparison, 17 percent of African American and 15 percent of Native American students are identified.<sup>11</sup>

### Homeless Students

Homeless students are “individuals who lack a fixed, regular, and adequate nighttime residence.”<sup>12</sup> Of the state’s 204,085 homeless students, 73 percent are Latino (149,115). Latino students, along with their African American and Native American peers, are over three times more likely to be homeless than white and Asian students.<sup>13</sup> Such students are more likely to repeat a grade, score lower on both math and language arts assessments, have a higher number of suspensions and expulsions, and drop out of school.<sup>14</sup>

## Migrant Students

While migrant students make up less than one percent of the overall student population, nearly all the state's 48,636 migrant students are Latino (98 percent).<sup>15</sup> Migrant students require extra support to ensure their continuity of education. As they move from one residence to another due to economic necessity, they often change their attendance zone within a district, move to another district, or even to another state.<sup>16</sup>

## Foster Youth

Of the state's 34,426 foster youth, 54 percent are Latino (18,592)—comparable to the group's proportion of the overall student population.<sup>17</sup> Students in foster care face many challenging circumstances. For example, almost half of students in foster care changed school midyear in their first year of foster care and 34 percent of 17- and 18-year-olds in foster care had attended five or more schools.<sup>18</sup> For more resources from CSBA about foster youth, visit [bit.ly/2NsnYp4](http://bit.ly/2NsnYp4).

## Academic Achievement

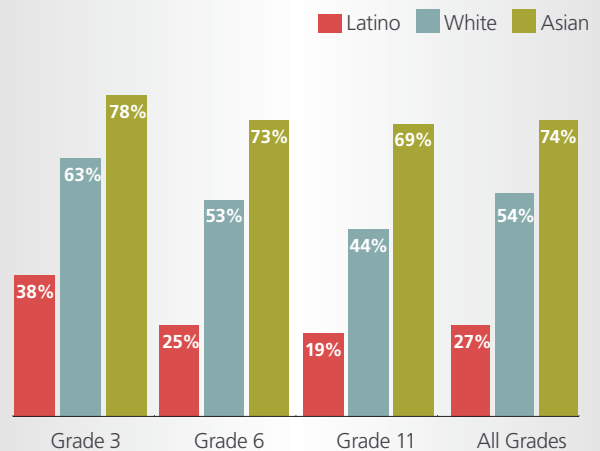
According to the 2017–18 California Assessment of Student Performance and Progress (CAASPP) results in math and English language arts, a significant achievement gap persists between Latino students and their white and Asian peers across all tested grades. For example, among sixth grade students that met or exceeded standards in math, there is a 28 percentage-point gap between Latino students and their white peers, and a 47 percentage-point gap between Latino students and their Asian peers.

Among sixth grade students that met or exceeded standards in English language arts, there is a 26 percentage-point gap between Latino students and their white peers, and a 39 percentage-point gap between Latino students and their Asian peers.

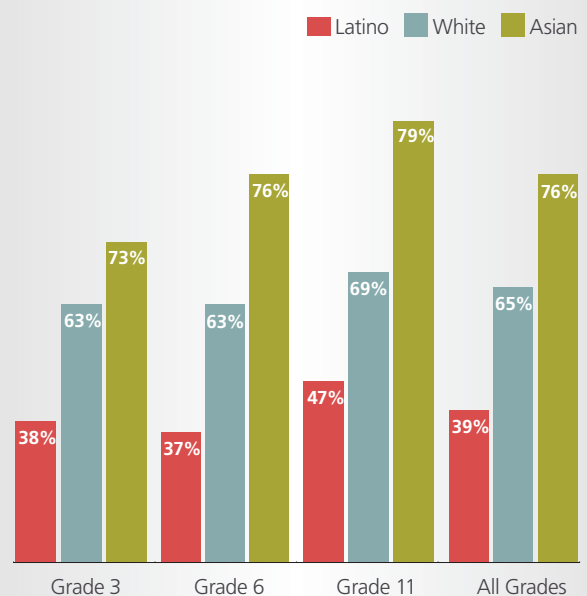
Moreover, 11th-grade results suggest that only 19 percent of Latino students are ready or conditionally ready for college-level math coursework, compared to 44 percent of white and 69 percent of Asian students. In English language arts, 47 percent of Latino students are ready or conditionally ready for college-level coursework, compared to 69 percent of white and 79 percent of Asian students.<sup>21</sup> While the California State University and many community colleges have been using 11th-grade math and English language arts

standardized test scores to indicate college readiness for a number of years, 11th-grade CAASPP scores have only been included in the college and career readiness index as part of the state accountability system since the 2016–17 school year.

**Figure 3.** 2017–18 CAASPP Math Percent of Latino, Asian, and White Students that Met or Exceeded Standards<sup>19</sup>



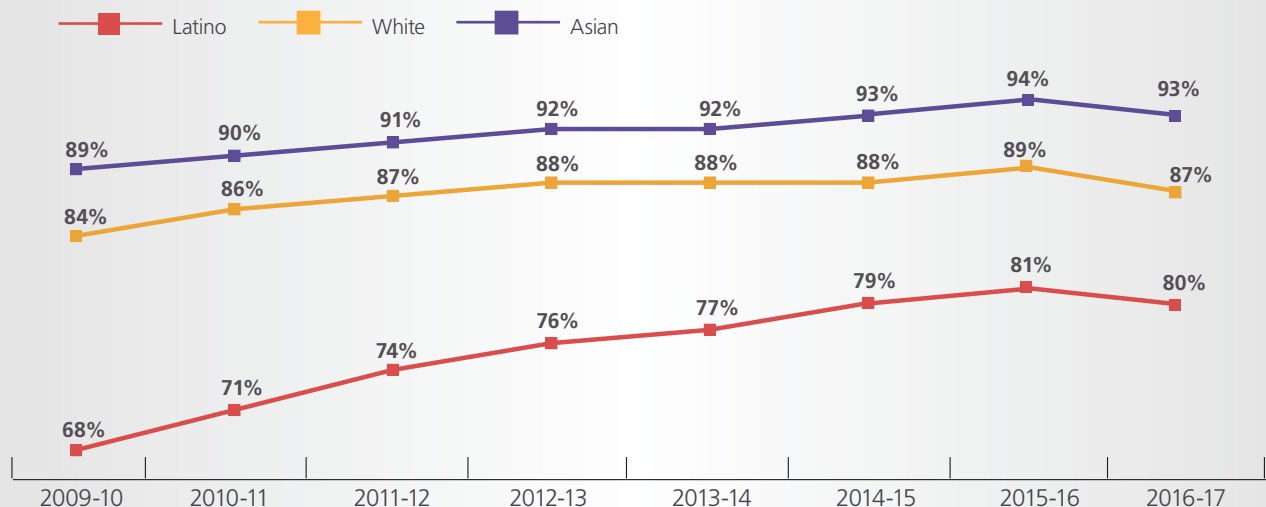
**Figure 4.** 2017–18 CAASPP English Language Arts Percent of Latino, Asian, and White Students that Met or Exceeded Standards<sup>20</sup>



## High School Graduation Rates

According to 2016–17 four-year cohort graduation data (the most recent available), 80 percent of Latino students graduated from high school, compared to 87 percent of white students and 93 percent of Asian students. Despite these gaps, cohort graduation rates have improved for all students since the 2009–10 school year, with the gap closing slightly between Latino students and their white and Asian peers.

**Figure 5.** Cohort Graduation Rates for the 2009–10 to 2016–17 Classes, by Latino, White and Asian Students<sup>22</sup>



However, despite the progress in high school graduation rates, only 39 percent of Latino students that graduate from high school do so having completed the courses required for entrance to a University of California or California State University campus—compared to 52 percent of white students and 74 percent of Asian students.<sup>23</sup>

### Questions for Board Members to Consider

As important decision-makers in their districts and counties, board members have the responsibility to ask questions and think strategically about closing achievement gaps for all students. While this brief has focused on state-level statistics, the challenges for individual districts and counties will be different depending on their demographics, geography, history, and local community needs. Seeking answers to the following questions can help board members better understand their local context:

1. What are the student demographics in my district or county and how do they compare to the demographics of individual schools?
2. Within individual schools, do Latino students have access to and enroll in rigorous coursework? What

supports are provided to help Latino students succeed in these rigorous courses?

3. What is the achievement of Latino students across the district or county and within individual schools? What is the achievement gap countywide, district-wide, and in each school?
4. What additional supports are available for students in poverty provided by the county office of education, the district, or through other organizations? Are there additional partnerships that can be leveraged to enhance supports?
5. Is the school environment relevant to all students based on their backgrounds and cultures? Does the course content relate to the experiences and backgrounds of Latino students (for example, does the history curriculum highlight the achievements of Latinos)?

6. Is the district or county staff equipped to relate to students' experiences and background? Does the teaching and administrative staff reflect the diversity of the student population?

## Conclusion

The information in this fact sheet is an overview of statewide results for Latino students. However, a more detailed analysis of data from each county, district, and school can help board members and other education leaders make more informed decisions about how to best serve this student population. As part of CSBA's continued efforts to shed light on California's diverse students, we will continue to produce additional briefs, fact sheets, and articles to highlight research-supported strategies and recommendations for board members to consider.

## Resources

Sample policies and administrative regulations are available to subscribers of CSBA's policy services through GAMUT Online at [bit.ly/2jM5Ntz](http://bit.ly/2jM5Ntz). These include:

- » BP 0415 – Equity
- » BP/AR 0460 – Local Control and Accountability Plan
- » BP/AR 3553 – Free and Reduced Price Meals
- » BP/AR 6146.1 – High School Graduation Requirements
- » BP/AR 6164.4 – Identification and Evaluation of Individuals for Special Education
- » BP/AR 6173 – Education for Homeless Children
- » BP/AR 6173.1 – Education for Foster Youth
- » BP/AR 6174 – Education for English Learners
- » BP/AR 6175 – Migrant Education Program

## Endnotes

- 1 CSBA Analysis: California Department of Education, Data-Quest. 2017-18 enrollment by ethnicity. Retrieved on September 19, 2018, from [bit.ly/2runvWt](http://bit.ly/2runvWt).
- 2 See endnote 1.
- 3 See endnote 1.
- 4 CSBA Analysis: California Department of Education, Data-Quest. Enrollment in California public schools by ethnic designation, 2017-18. Retrieved on September 19, 2018 from [bit.ly/2rs0WBb](http://bit.ly/2rs0WBb).

- 5 See endnote 1.
- 6 See endnote 1.
- 7 CSBA Analysis: California Department of Education. Student poverty FRPM data. Retrieved on September 19, 2018 from [bit.ly/2NWmYJh](http://bit.ly/2NWmYJh).
- 8 See endnote 7.
- 9 CSBA Analysis: California Department of Education, Data-Quest. 2017-18 enrollment by ethnicity and grade. Retrieved on September 19, 2018, from [bit.ly/2FUWIMY](http://bit.ly/2FUWIMY).
- 10 Hibel, J., Farkas, G., & Morgan, P. L. (2006). Who is placed in special education? *Sociology of Education*, 83(4): 312–332. Available at [bit.ly/2xnCnc2](http://bit.ly/2xnCnc2).
- 11 See endnote 1.
- 12 California Department of Education. Definition of homeless children and youths. Available at [bit.ly/2PQkdGL](http://bit.ly/2PQkdGL).
- 13 See endnote 1
- 14 Hartman, C. (2009). *Homelessness and Student Learning*. Poverty and Race Research Action Council, Washington, D.C. Available at [bit.ly/2NqKoY2](http://bit.ly/2NqKoY2).
- 15 See endnote 1.
- 16 California Department of Education. Overview of migrant education in California. Available at [bit.ly/2PQ7LXw](http://bit.ly/2PQ7LXw).
- 17 See endnote 1.
- 18 California School Boards Association. (2016). *Our foster youth: What school boards can do*. Available at [bit.ly/2O1orhs](http://bit.ly/2O1orhs).
- 19 CSBA Analysis: California Department of Education, California Assessment of Student Performance and Progress. 2018 California statewide research file. Retrieved on October 3, 2018 from [bit.ly/2DWPk2A](http://bit.ly/2DWPk2A).
- 20 See endnote 19.
- 21 See endnote 19.
- 22 CSBA Analysis: California Department of Education, Data-Quest. 2016-17 four-year adjusted cohort graduation rate. Retrieved on September 19, 2018 from [bit.ly/2wlm88y](http://bit.ly/2wlm88y).
- 23 CSBA Analysis: California Department of Education, Data-Quest. 12th grade graduates completing all courses required for U.C. and/or C.S.U. entrance, all students. Retrieved on September 19, 2018 from [bit.ly/2FYyTyv](http://bit.ly/2FYyTyv).

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# Governance Brief

## Native American Students in California Public Schools

by Manuel Buenrostro

### Introduction

Native American students (identified as American Indian or Alaskan Native by the California Department of Education) bring with them social, cultural, and personal assets that can contribute to learning in all public schools. While there are relatively few Native American students in California, they face significant challenges. They are among the most socioeconomically disadvantaged students in the state, and based on several measures, the least connected to school.

This brief summarizes key demographic and achievement data as part of an effort to highlight challenges faced by Native American students and the need to provide them with more opportunities for success. School district and county board members can use this information to better understand these students and identify strategies to support them.

### Enrollment Trends

Of the 6.2 million K-12 students who attend California public schools, 32,500 are Native American.<sup>1</sup> Over the past 15 years, both the number and proportion of these students in California's public schools have declined. From the 2002–03 to the 2017–18 school years, the proportion of Native American students decreased from 0.86 percent to 0.52 percent, while their total numbers decreased from 53,955 to 32,500 students—a 40 percent decrease.<sup>2</sup>

### *Enrollment by County*

Native American students attend school in all 58 California counties. In most counties, however, fewer than 1 percent of students are Native American. Those counties with a higher concentration of Native American students are among the smallest and most rural in the state.<sup>3</sup>

### In this brief you will find:

- » An overview of the enrollment trends of Native American students, including their enrollment and concentration by county and local educational agency (LEA).
- » Information about their socioeconomic, special education, language, homeless, and foster youth status.
- » A summary of their academic achievement outcomes.
- » A summary of indicators of school connectedness, including high school graduation, dropout, chronic absenteeism, suspension, and expulsion rates.
- » Questions for board members to consider.

### *Enrollment by LEA*

The concentration of Native American students varies considerably at the LEA level (which includes school districts, charter schools, county offices of education, and state special schools). Most LEAs (86 percent) enroll at least one Native American student, but more than half enroll fewer than 15 of these students.<sup>4</sup> This means Native American students have few peers of the same cultural backgrounds, a factor which may impact their level of school connectedness (see School Connectedness section on page 5).

**Table 1. 2017-18 Native American Student Enrollment by County**

County	All Students	Native American Students	Percent
Alpine	80	38	47.50%
Del Norte	4,228	589	13.93%
Inyo	4,497	436	9.70%
Humboldt	18,501	1,620	8.76%
Siskiyou	5,934	452	7.62%
Trinity	1,584	106	6.69%
Mendocino	13,203	874	6.62%
Modoc	1,411	86	6.09%
Lassen	3,791	176	4.64%
Lake	9,549	427	4.47%
Mariposa	1,865	76	4.08%
Shasta	26,935	1,077	4.00%
Plumas	2,169	68	3.14%
Amador	4,147	114	2.75%
Tehama	10,958	280	2.56%
Butte	31,760	782	2.46%
Tuolumne	6,076	146	2.40%
Yuba	14,619	335	2.29%
Mono	1,890	37	1.96%
Glenn	5,581	108	1.94%
Colusa	4,627	74	1.60%
Calaveras	5,461	83	1.52%
Nevada	11,424	142	1.24%
Sierra	407	5	1.23%
Kings	29,203	337	1.15%
Madera	31,728	343	1.08%
Imperial	37,716	392	1.04%
El Dorado	27,875	259	0.93%
Sutter	23,690	209	0.88%

County	All Students	Native American Students	Percent
Sonoma	70,449	610	0.87%
San Joaquin	148,948	1,161	0.78%
Tulare	104,049	777	0.75%
Sacramento	245,906	1,615	0.66%
Placer	74,063	477	0.64%
Fresno	204,418	1,275	0.62%
Kern	189,949	1,054	0.55%
Stanislaus	109,990	585	0.53%
Merced	58,812	301	0.51%
Yolo	30,067	152	0.51%
San Luis Obispo	34,733	171	0.49%
San Diego	508,169	2,456	0.48%
Riverside	428,992	2,033	0.47%
Solano	63,481	297	0.47%
San Bernardino	403,137	1,872	0.46%
Marin	33,741	133	0.39%
Santa Barbara	69,752	258	0.37%
San Francisco	60,898	218	0.36%
Santa Cruz	40,393	136	0.34%
Santa Clara	272,132	893	0.33%
Contra Costa	178,060	551	0.31%
Napa	20,402	53	0.26%
Alameda	228,356	577	0.25%
San Benito	11,253	28	0.25%
Ventura	137,758	328	0.24%
Los Angeles	1,492,652	3,433	0.23%
Orange	485,835	1,079	0.22%
Monterey	77,954	145	0.19%
San Mateo	95,155	161	0.17%

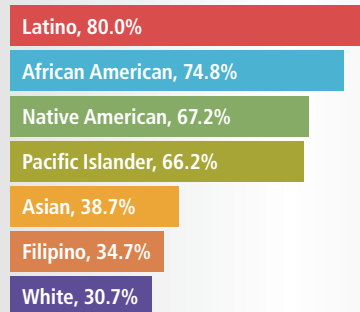
## Student Characteristics

When looking at characteristics of Native American students, there are multiple factors that impact their educational attainment. Understanding these characteristics in their counties, districts, and schools can help board members better meet the needs of Native American students. This section is based on data from the 2017–18 school year.

### Socioeconomic Status

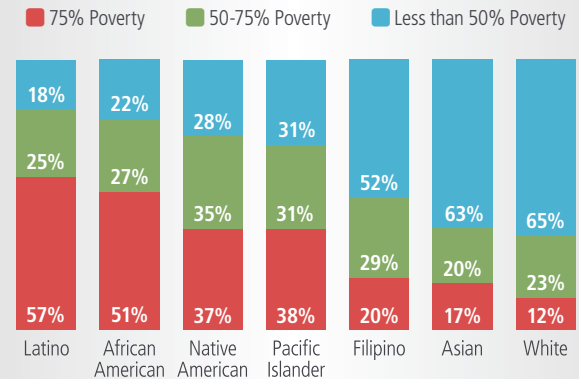
Native American students are among the most socioeconomically disadvantaged students in the state. Socioeconomically disadvantaged students are those for whom neither of their parents received a high school diploma or who are eligible for the free or reduced-price meals program. More than two in three (67.2 percent) Native American students are socioeconomically disadvantaged, compared to fewer than one in three White students.<sup>5</sup>

**Figure 1: 2017–18 Percentage of Socioeconomically Disadvantaged Students, by Ethnicity**



Of particular concern is the concentration of Native American students in high-poverty schools. High-poverty schools have less access to factors that are key to creating educational opportunity, including the most experienced teachers, 21st-century facilities, libraries, and other resources. Nearly three in four (72 percent) Native American students attend schools where half or more students are eligible for the free or reduced-priced meals program (the most common barometer for measuring poverty among student groups). Moreover, almost 40 percent of Native American students attend school where three-quarters of their peers are eligible for the free or reduced-priced meals program.

**Figure 2. 2017–18 Enrollment by School Proportion of Students Eligible for Free or Reduced-Price Meals**



### Students with Disabilities

Native American students are identified as having disabilities at considerably higher rates than most of their peers, second only to African-American students. While 11.3 percent of all students are identified as students with disabilities, 15.4 percent of Native American students are identified.<sup>6</sup>

Students with disabilities have learning or physical differences that may range from minor to severe. Schools provide a vital service by ensuring all students can meet challenging objectives. In fact, the federal Individuals with Disabilities Education Act (IDEA) requires LEAs to identify all students in their jurisdiction who have a disability, and ensure the provision of “resources, adapted instruction, and specialized assistance to mitigate the effects of [their] disability.”<sup>7</sup>

### English Learners

Only 5.3 percent of Native American students are English learners, defined as students whose native language is not English and who have not yet developed the English proficiency to participate in the regular classroom program. The proportion of Native American students who are English learners is greater for those in the earlier grades—9.2 percent of first-grade Native American students are English learners, compared to 4.2 percent in sixth grade and 3.2 percent in ninth grade.<sup>8</sup>

### Homeless Students

Homeless students are “individuals who lack a fixed, regular, and adequate nighttime residence.”<sup>9</sup> Native American students—along with their African American, Latino, and Pacific Islander peers—experience higher rates of

homelessness when compared to Asian, Filipino, and White students. For example, 4.4 percent of Native American students experience homelessness compared to 1.4 percent of White students. Of the state’s 204,085 homeless students, 1,439 (0.7 percent) are Native American.<sup>10</sup>

### Foster Youth

Native American and African American students are more likely to be in foster care than their peers from other student groups. Data show 1.6 percent of Native American and 1.9 percent of African American students are foster youth; the next highest proportion is 0.6 percent for Latino students. Of the state’s 34,426 foster youth, 526 (1.5 percent) are Native American.<sup>11</sup>

Students in foster care face circumstances that are more challenging than those faced by many of their peers. For example, almost half of students in foster care changed school midyear in their first year of foster care and 34 percent of 17- and 18-year-olds in foster care had attended five or more schools.<sup>12</sup> For more resources from CSBA about foster youth, visit [bit.ly/2NsnYp4](http://bit.ly/2NsnYp4).

### Academic Achievement

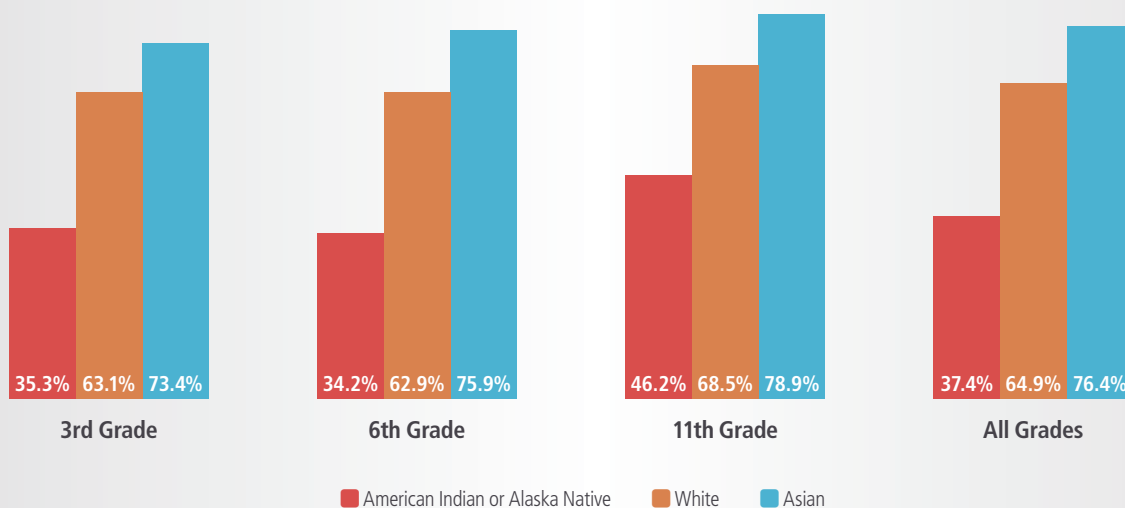
According to the 2017–18 California Assessment of Student Performance and Progress (CAASPP) results in English language arts and math, there is a significant achievement

gap between Native American students and their White and Asian peers across all tested grades. For example:

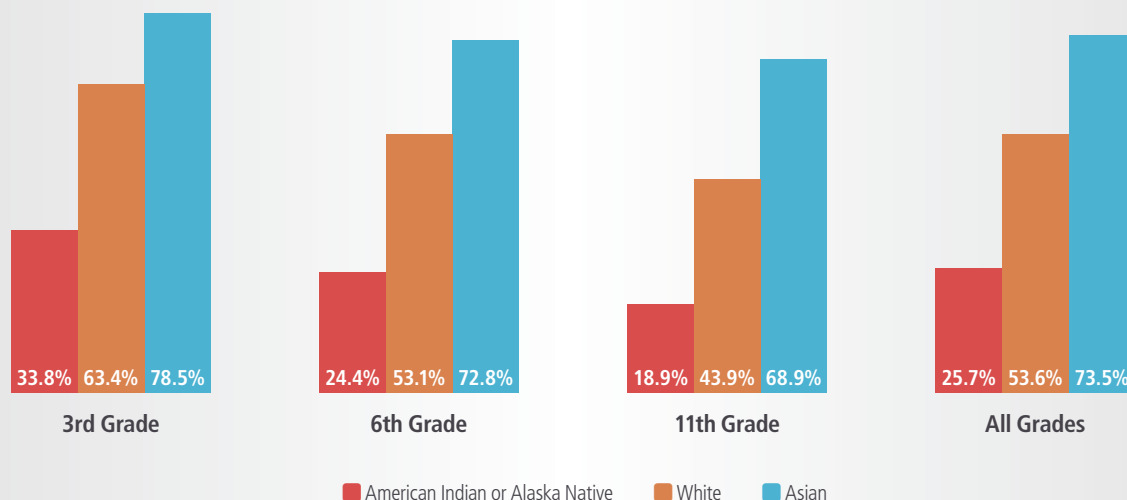
- » Among sixth-grade students who met or exceeded standards in English language arts, there is a 28.7 percentage-point gap between Native American students and their White peers, and a 41.7 percentage-point gap between Native American students and their Asian peers.<sup>13</sup>
- » Among sixth-grade students who met or exceeded standards in math, there is a 28.7 percentage-point gap between Native American students and their White peers, and a 48.3 percentage-point gap between Native American students and their Asian peers.<sup>14</sup>

The California State University system and many community colleges have been using 11th-grade math and English language arts standardized test scores to indicate college readiness for several years. 11th-grade CAASPP scores will be included in the College and Career Readiness indicator as part of the state accountability system, the California School Dashboard. Given this approach, 11th-grade results suggest that less than half (46.2 percent) of Native American students are ready or conditionally ready for college-level English language arts coursework, compared to 68.5 percent of White and 78.9 percent of Asian students. In math, less than one in five (18.9 percent) of Native American students are ready or conditionally ready for college-level coursework, compared to 43.9 percent of White and 68.9 percent of Asian students.<sup>15</sup>

**Figure 3. 2017–18 CAASPP English Language Arts Percent of Latino, Asian, and White Students that Met or Exceeded Standards**



**Figure 4. 2017–18 CAASPP Math Percent of Native American, Asian, and White Students that Met or Exceeded Standards**



## School Connectedness

A major issue among Native American students is their connectedness to school, which has a profound impact on their ability to learn, make progress, and graduate from high school. When compared to all other student groups, Native American students have:

- » The lowest high school graduation rate and the lowest proportion of graduates meeting A-G requirements;
- » The highest dropout, chronic absenteeism, and expulsions rates; and
- » The second highest suspension rates, when compared to other student groups.

Given these troublesome statistics, boards should look at their local data and learn more about strategies to support the connectedness of Native American students in their schools.

### High School Graduation

According to 2016–17 four-year cohort graduation data, Native American students had the lowest graduation rate of all student groups—68.2 percent of Native American students graduated from high school, compared to 87.3 percent of White and 93.1 percent of Asian students.<sup>16</sup>

Moreover, this statistic becomes more worrisome when considering that Native American students who graduated from high school also had the lowest rates of preparedness for admission to and success in a University of California (UC) or California State University (CSU) campus. According to 2016–17 data, the most recent available, only 28.6 percent of Native American students graduated from high school having completed their A-G course requirements, compared to 52.1 percent of White and 73.5 percent of Asian students.<sup>17</sup>

### Dropout

Native American students have the highest high school dropout rate among all groups. In fact, the dropout rate for Native American students (5 percent) is more than twice the rate of all students (2.4 percent) and more than three times the rate of White students (1.5 percent).<sup>18</sup>

### Chronic Absenteeism

When looking at the proportion of students who are chronically absent (those who are absent for 10 percent or more of the days they are expected to attend school), the rate for Native American students is again the highest among all student groups. More than one in five (20.9 percent) Native American students are chronically absent, compared 9.7 percent of White and 3.6 percent of Asian students.<sup>19</sup>

## Suspensions

Native American students have the second highest suspension rate of all student groups and are more than twice as likely to be suspended than their White peers. The suspension rate for Native American students is 7.4 percent compared to 3.2 percent for White and 1.1 percent for Asian students.<sup>20</sup>

## Expulsions

Native American students have the highest expulsion rate of all student groups. The expulsion rate for Native American students is 0.25 percent compared to 0.07 percent for White and 0.02 percent for Asian students.<sup>21</sup>

## Questions for Board Members to Consider

As decision-makers in their districts and county offices of education, board members have the responsibility to ask questions and think strategically about closing achievement gaps for all students. While this brief has focused on state-level statistics, the challenges for individual districts and county offices of education will depend on their demographics, geography, history, and local community needs.

Seeking answers to the following questions can help board members better understand their local context:

1. How many Native American students are in my district or county and where are they attending school?
2. Within individual schools, do Native American students have access to and enroll in rigorous coursework? What supports are provided to help Native American students succeed in these rigorous courses?
3. What is the achievement of Native American students across the county or district and within individual schools? What is the achievement gap countywide, districtwide, and in each school?
4. Looking at indicators of school connectedness (drop-out, absenteeism, graduation, etc.), how are Native American students doing in the county, district, and in each school?
5. Does the county or district offer courses that include the experiences and backgrounds of Native American students (for example, does the history curriculum highlight the achievements of Native American communities)?

6. Does the teaching and administrative staff reflect the diversity of the student population? Does staff have professional learning that prepares them to work with Native American students and their families effectively?

## Conclusion

This brief is part of CSBA's continued effort to shed light on California's diverse student population. As Native American students are foundational to the Golden State's cultural fabric, it is critical for governing boards to understand their backgrounds and needs, and the challenges educators face in providing them with the necessary supports to meet their potential. CSBA will continue to produce additional briefs, fact sheets, and articles to highlight research-supported strategies and recommendations for board members to consider.

## Resources

Sample policies and administrative regulations are available to subscribers of CSBA's policy services through [GAMUT Online](https://www.csba.org/GAMUTOnline) at [www.csba.org/Gamutonline](https://www.csba.org/Gamutonline). These include:

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- » BP/AR 6173.1 - Education for Foster Youth
- » BP/AR 6174 - Education for English Learners

**Manuel Buenrostro** is an Education Policy Analyst for California School Boards Association

## Endnotes

- 1 CSBA Analysis: California Department of Education, DataQuest. *2017-18 enrollment by ethnicity*. Downloaded September 6, 2018, from <https://bit.ly/2runvWt>
- 2 CSBA Analysis: California Department of Education, DataQuest. *Selected statewide data for the year 1997-98, 1998-99, 1999-2000, 2000-01, 2001-02, 2002-03, 2003-04, 2004-05, 2005-06, 2006-07, 2007-08, 2008-09, 2009-10, 2010-11, 2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17, and 2017-18*. Downloaded May 8, 2018, from <https://bit.ly/2jFV0ke>
- 3 See endnote 1.
- 4 See endnote 1.
- 5 CSBA analysis: California Department of Education. *Unduplicated student poverty – free or reduced price meals data 2017-18*. Downloaded Sept. 4, 2018 from [www.cde.ca.gov/ds/sd/sd/filessp.asp](http://www.cde.ca.gov/ds/sd/sd/filessp.asp); and California Department of Education, Dataquest. *Enrollment in California public schools by ethnic designation, 2017-18*. Downloaded Sept. 4, 2018 from <https://bit.ly/2PEZfLc>
- 6 See endnote 1.
- 7 Hibel, J., Farkas, G., & Morgan, P. L. (2006). Who is placed in special education? *Sociology of Education*, 83(4): 312–332. Available at <https://bit.ly/2xnCnc2>.
- 8 See endnote 1.
- 9 California Department of Education. *Definition of homeless children and youths*. Available at <https://bit.ly/2PQkdGL>.
- 10 See endnote 1.
- 11 See endnote 1.
- 12 California School Boards Association. (2016). *Our foster youth: What school boards can do*. Available at <https://bit.ly/2O1orhs>.
- 13 CSBA Analysis: California Department of Education, California Assessment of Student Performance and Progress. 2018 *California statewide research file*. Retrieved on Oct. 3, 2018 from <https://bit.ly/2DWPk2A>.
- 14 See endnote 13
- 15 See endnote 13.
- 16 California Department of Education, DataQuest. *Cohort outcome summary report by race/ethnicity*. Downloaded April 2, 2018, from <https://bit.ly/2G0hWDD>
- 17 California Department of Education, DataQuest. *12th grade graduates completing all courses required for U.C. and/or C.S.U. entrance: State of California 2016-17*. Downloaded May 8, 2018, from <https://bit.ly/2FYyTyv>
- 18 California Department of Education, DataQuest. *Dropouts by ethnic designation by grade: 2016-17 state of California*. Downloaded April 12, 2018 from <https://bit.ly/2v4SbSk>
- 19 California Department of Education, DataQuest. *2016-17 chronic absenteeism rate*. Downloaded April 12, 2018 from <https://bit.ly/2EJG1OE>
- 20 California Department of Education, DataQuest. *2016-17 suspension rate*. Downloaded April 12, 2018 from <https://bit.ly/2HzoThy>
- 21 California Department of Education, DataQuest. *2016-17 expulsion rate*. Downloaded April 12, 2018 from <https://bit.ly/2Hx2gdF>

# Governance Brief

## 2017–18 CAASPP Results for English Language Arts and Mathematics

by Manuel Buenrostro

### Introduction

In October, the California Department of Education (CDE) released the results of the 2017–18 Smarter Balanced (SBAC)<sup>1</sup> English language arts/literacy (ELA) and mathematics assessments. Compared to the 2016–17 results, there are slight gains for all student groups. However, significant gaps in performance between student groups remain.

This brief examines California’s overall student performance in the fourth year of SBAC testing for ELA and mathematics.<sup>2</sup> The achievement data included can help governance teams consider their scores and progress in view of statewide results. This brief also includes questions that board members might ask about their local data to help them understand the progress of students in their schools, as well as resources they can share with their communities.

### Fourth Year of Smarter Balanced Assessments

In 2015, California transitioned from the paper-based, multiple-choice Standardized Testing and Assessment tests to the computer-adaptive SBAC for ELA and mathematics. The SBAC tests are based on the Common Core State Standards, which represent a significant change in teaching and learning for California’s classrooms. The SBAC tests are part of the broader California Assessment of Student Performance and Progress (CAASPP) system, which also consists of California Science Tests (which will be field tested in 2017–18), Standards-based Tests in Spanish, and the California Alternate Assessments (in ELA, mathematics, and science) for students who have the most significant cognitive disabilities.

### In this brief you will find:

- » **An analysis of the statewide 2017–18 ELA and mathematics test results, including:**
  - › **How the 2017–18 results compare to those from 2016-17.**
  - › **Results by student group, and what they say about achievement gaps.**
  - › **What the results say about college-readiness for 11th-grade students.**
- » **Questions for board members to consider when analyzing local results.**
- » **Resources available to communicate results with parents and teachers.**

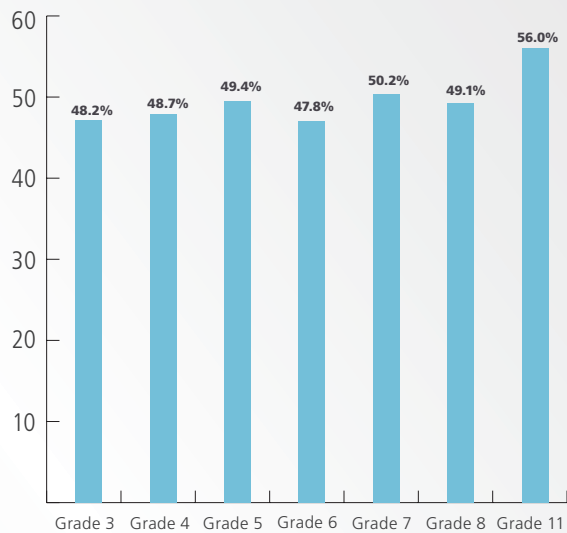
SBAC results are a critical component of the new California School Dashboard. Specifically, ELA and mathematics results for grades 3-8 are used as indicators of academic achievement on the Dashboard. In addition, California State Universities and many community colleges use 11th-grade SBAC performance to signify readiness for college-level coursework, and these scores will be one of the measures used to calculate school and district performance for the College/Career Indicator that is being developed by the state.



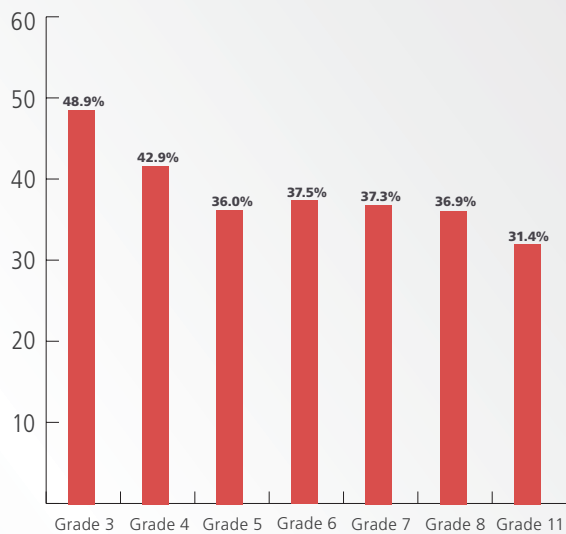
## California Student Performance in ELA and Mathematics

In spring 2018, nearly 3.2 million California students took the SBAC assessments for ELA and mathematics. Overall, 49.9% of California students in grades 3-8 and 11 met or exceeded grade-level standards in ELA. Performance was considerably lower in mathematics—38.7% of students met or exceeded grade-level standards.

**Figure 1:** 2017-18 percentage of all students who met or exceeded standards in ELA, by grade



**Figure 2:** 2017-18 percentage of all students who met or exceeded standards in mathematics, by grade



## Comparing Performance from Previous Years

This is the fourth year of implementation of the SBAC tests, and the Common Core State Standards on which they are based have only recently been fully implemented. Moreover, student populations can change from year to year. Thus, comparisons to previous years' results should be made with caution. Moreover, these results represent just one indicator of student progress for districts and county offices of education to consider. Change takes time and thoughtful monitoring and community engagement can help districts and county offices of education stay focused on their priorities and refine strategies as necessary. Board members have an important role to play in the improvement process by articulating a clear vision and goals for student success and supporting investments in strategies for closing opportunity and achievement gaps that will help realize these goals.

## Performance by Student Group and Achievement Gaps

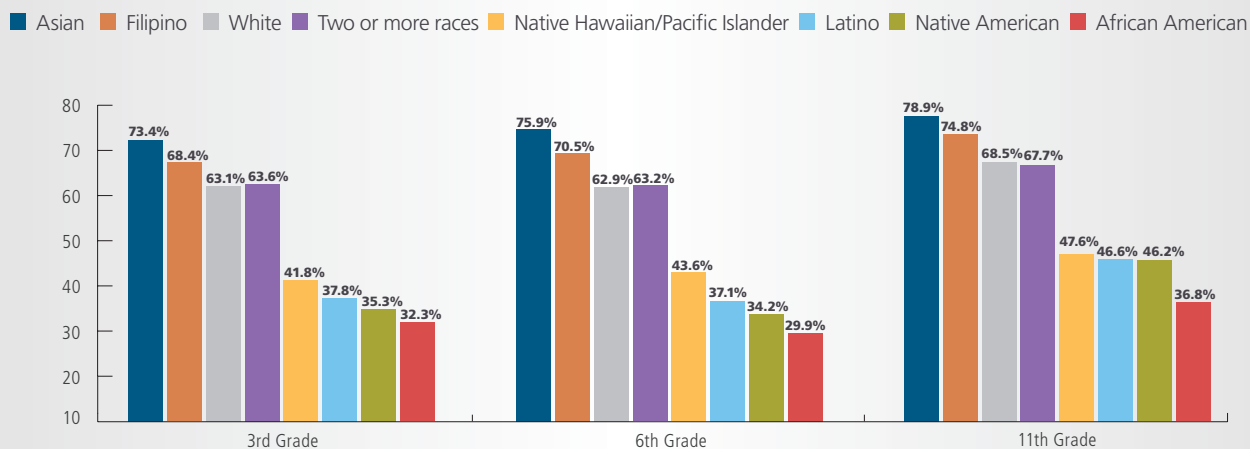
The state's achievement gaps—the result of long-standing disparities in educational opportunities—remain troubling. California can use this data to inform strategies to increase support for historically underserved students. To reduce performance gaps, lower-performing student groups need to improve at a faster rate. The LCFF places particular emphasis on equity for ELs, economically disadvantaged students, and foster youth by providing supplemental and concentration funding to offset the cost of providing additional support for these students. Persistent achievement gaps suggest that districts and county offices of education will need to invest in strategies that result in faster growth for student groups for which there are significant gaps.

### *Ethnic Groups*

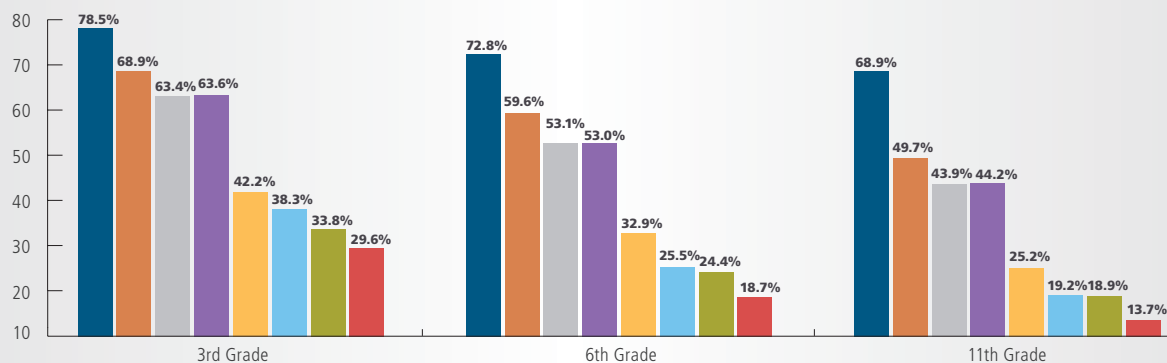
In ELA, 76.4% of Asian students, 71.2% of Filipino students, and 64.9% of White students met or exceeded grade-level standards. In contrast, only 39.3% of Latino, 37.4% of Native American, and 32.3% of African-American students met or exceeded grade-level standards. There is a staggering 25.7 percentage-point achievement gap between Latino and White students, and a 32.6 percentage-point achievement gap between African-American and White students—a slight decrease compared to the 2016-17 gaps. These gaps persist across all tested grades, which include 3-8th and 11th grade.

Students did not perform as well in mathematics, where the gaps are even wider. While 73.5% of Asian, 58.5%

**Figure 3:** 2017–18 percentage of 3rd, 6th, and 11th grade students who met or exceeded standards in ELA, by ethnicity



**Figure 4:** 2017-18 percentage of 3rd, 6th, and 11th grade students who met or exceeded standards in Math, by ethnicity



of Filipino, and 53.6% of White students met or exceeded grade-level standards in mathematics, only 26.6% of Latino, 25.7% of Native American, and 19.7% of African-American students did the same. These results represent a 26.9 percentage-point achievement gap between Latino and White students, and a 33.8 percentage-point gap between African-American and White students—a slight decrease compared to the 2016-17 gap for Latino students and no change for African-American students.

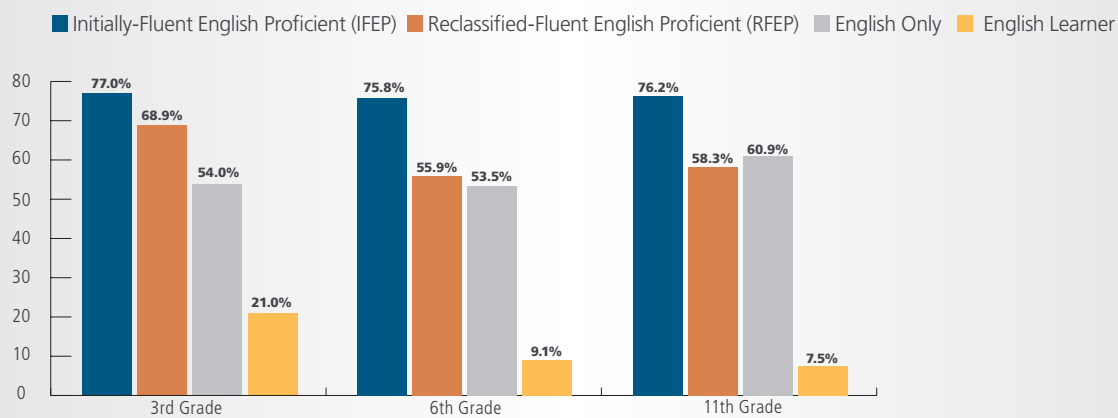
### English Learners

The academic achievement of California’s 1.3 million ELs is identified as a policy priority within the LCFF. Therefore, boards should have a clear understanding of how ELs are progressing in their schools. Unlike other student groups, the EL group is not static: new students move into the EL category as they enter school in kindergarten and other grades and out of the EL category as they achieve English

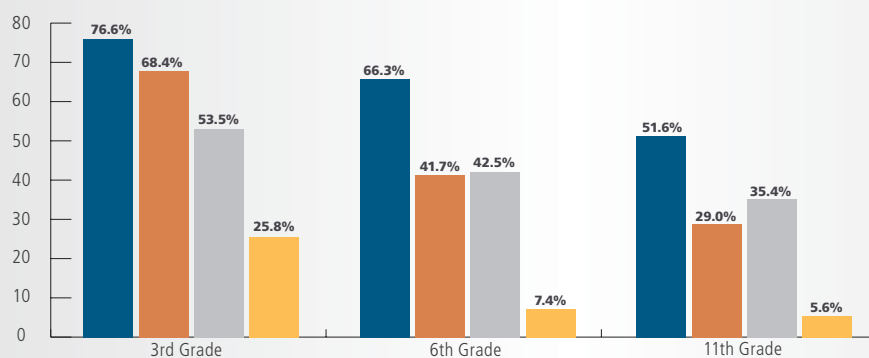
proficiency. Moreover, while the English learner academic indicator on the Dashboard combines ELs and students who were reclassified (RFEPs) within the past four years, boards should consider the achievement of ELs and RFEPs separately to more accurately monitor the progress of each group, and to ensure that the progress of RFEPs does not fall off once they are reclassified. When compared to most other student groups, a lower proportion of ELs met or exceeded grade-level standards in both ELA and mathematics.

ELs who have been in U.S. schools for 12 or more months are required to take the ELA test. By definition ELs are not proficient in English; thus, it is not surprising that only 12.6% met or exceeded grade-level standards, compared to 55.6% of English-only students, and 58.4% of RFEP students. This represents a 42.9 percentage-point gap between EL and English-only students—a slight widening compared to the 2016–17 gap.

**Figure 5.** 2017-18 percentage of 3rd, 6th, and 11th grade students who met or exceeded standards in ELA, by English language status



**Figure 6.** 2017-18 percentage of 3rd, 6th, and 11th grade students who met or exceeded standards in Math, by English language status



All ELs—including those who have been in U.S. schools for less than 12 months—are required to take the mathematics test. Only 12.6% of ELs met or exceeded standards in mathematics compared to 43.5% of English-only students, and 41.5% of RFEP students. This represents a 30.9 percentage-point gap between EL and English only students—a slight increase in the gap compared to 2016–17.

A positive note is the performance of students who come from a household where a language other than English is spoken and who demonstrated English proficiency upon entering school. These are students who have grown up bilingually and have some level of proficiency—and are often fluent in a language in addition to English. In both ELA and mathematics, and in all tested grades, a significantly larger proportion of these initially fluent English proficient (IFEP) students met or exceeded standards than their English-only peers.

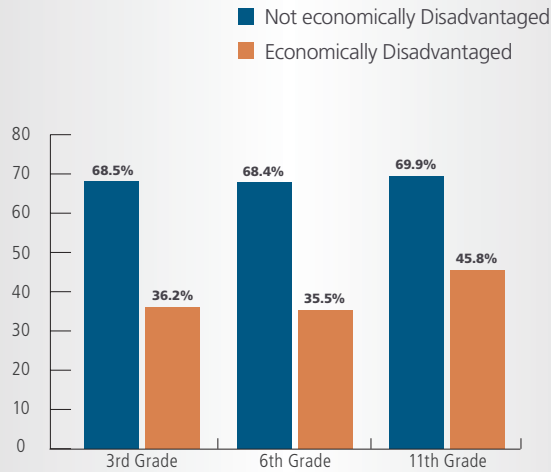
## Economically Disadvantaged Students

Also prioritized under LCFF are the state’s 3.6 million economically disadvantaged students, defined as students who are eligible for the free and reduced-price meal program. Unfortunately, only about half as many economically disadvantaged students met or exceeded grade-level standards as their non-economically disadvantaged peers.

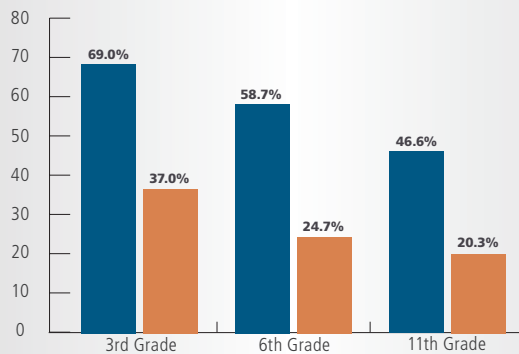
In ELA, 37.7% of economically disadvantaged students met or exceeded grade-level standards, compared to 69.3% of non-economically disadvantaged students. This represents a 31.6 percentage-point gap, a narrowing of the 2016-17 school year gap.

In mathematics, 26.2% of economically disadvantaged students met or exceeded grade-level standards, compared to 58.4% of non-economically disadvantaged students. This represents a 32.2 percentage-point gap and a slight narrowing of the gap from the 2016-17 school year.

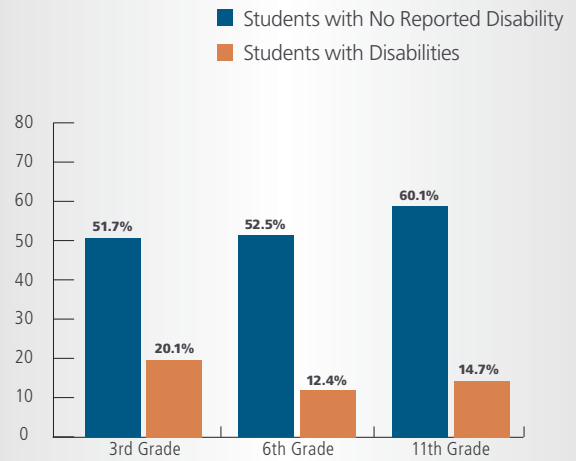
**Figure 7.** 2017-18 percentage of 3rd, 6th, and 11th grade students who met or exceeded standards in ELA, by economic status



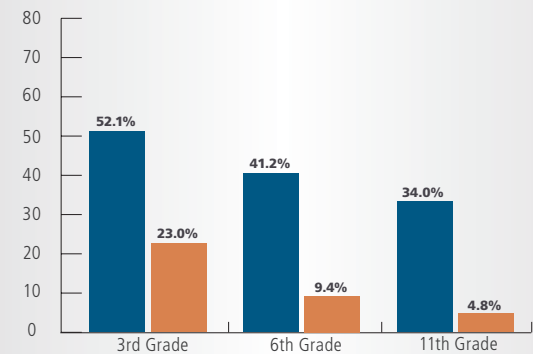
**Figure 8.** 2017-18 percentage of 3rd, 6th, and 11th grade students who met or exceeded standards in Math, by economic status



**Figure 9.** 2017-18 percentage of 3rd, 6th, and 11th grade students who met or exceeded standards in ELA, by disability status



**Figure 10.** 2017-18 percentage of 3rd, 6th, and 11th grade students who met or exceeded standards in Math, by disability status



## Students with Disabilities

During the 2017–18 school year, California served over 774,000 children and youth with identified disabilities (birth to age 22). While LCFF does not provide additional funding specifically for students who receive special education services, many of these students are also economically disadvantaged, ELs, or foster youth. Moreover, the California School Dashboard is designed to hold schools and districts accountable for improving outcomes for all students, including those with disabilities.

In ELA, only 15% of students with disabilities met or exceeded grade-level standards, compared to 54.3% of

students with no reported disability (a 39.3 percentage-point gap).

In mathematics, only 11.9% of students with disabilities met or exceeded grade-level standards, compared to 42% of students with no reported disability (a 30.1 percentage-point gap). Both gaps for ELA and mathematics represent a slight widening of the gap from the previous year between students with disabilities and their non-disabled peers, even though a larger proportion of students with disabilities met or exceeded grade-level standards.

## College Readiness

As mentioned earlier, California State Universities and many community colleges use 11th-grade SBAC performance to signify readiness for college-level coursework, and these scores are one of the measures used to calculate school and district performance for the College/Career Indicator being developed by the state. Therefore, it is particularly important that districts and schools monitor how all student groups perform on this measure.

In ELA, 11th-grade scores indicate that nearly three of five students met or exceeded grade-level standards, and thus are deemed to be ready or conditionally ready for college-level coursework, while more than two in five are not ready (see Figure 1). Results for some student groups show significant gaps between their scores and those of the highest-scoring groups. For example, less than half of 11th-grade Latino, Native Hawaiian/Pacific Islander, or Native American students and only 36.8% of African-American students met or exceeded standards (see Figure 3). Far fewer students with disabilities or ELs met standards, approximately 14.7% and 7.5% respectively (see Figures 5 and 9), while less than half of economically disadvantaged students met or exceeded standards.

In mathematics, 11th-grade scores are significantly lower—approximately one in three students met or exceeded grade-level standards, and thus are deemed ready or conditionally ready for college-level coursework, while two in three are not ready (see Figure 2). Again, we see significant gaps between Asian, Filipino, and White students and other student groups. While 68.9% of Asian students, 49.7% of Filipino students, and 43.9% of White students met grade-level standards—only 19.2% of Latino, 18.9% of Native American, and 13.7% of African-American students met these standards (see Figure 4). Far fewer students with disabilities or ELs meet standards, approximately 4.8% and 5.6% respectively (see Figures 6 and 10), while only one in five economically disadvantaged students met or exceeded standards.

## Questions for Board Members

This brief focuses on statewide data but when looking at local data, boards can ask questions about results in their own districts or county offices of education that can help them understand the progress of students in their schools:

### *Comparisons*

- » How do our 2017–18 results compare with our performance from previous years?
- » What patterns do we observe when looking at performance at the district’s individual school sites?
- » How does our performance compare to the performance of similar districts and similar schools?

### *Closing Gaps*

- » Which student groups have the largest achievement gaps in our district or county office of education? How does the performance of these student groups in our district or county office of education compare to their performance in the state and similar districts and schools?
- » How are LCFF funds being used to support our lowest performing student groups? Given these results, are adjustments to our goals or budget appropriate?
- » When looking at performance across different grade levels and student groups, are there areas that the board should study further? What additional data would be useful?
- » If gaps narrowed or widened within our district or county office of education, what additional information would help our governance team better understand why?
- » Are there schools within our district or county office of education that achieved better performance for similar student groups? How can we learn from what these schools and districts have achieved?

### *Planning and Communication*

- » How can we use our SBAC results to inform our 2019 LCAP update? To use this data to make strategic decisions, what additional information would we need?
- » How can we share these results with the community in a way that will increase stakeholder engagement, involvement, and support for student achievement efforts?
- » In communicating results, what are the areas of most concern to the community that might warrant further

analysis? What are some areas that should be highlighted and celebrated?

## Conclusion

Board members should understand the performance of all of the students in their schools, note where achievement gaps exist, and clearly communicate with their communities about achievements, challenges, and strategies for improving outcomes. Statewide results can help in these efforts by adding context to the performance of students locally. Ultimately, the goal of using education data should be to support a culture of trust and continuous improvement where challenges are openly acknowledged and responsibility for progress is shared among the board, superintendent, staff, and the community.

## Additional Resources

[Official CAASPP Site with Results for English Language Arts/Literacy and Mathematics](#). Allows users to compare test scores across counties, districts, school, or the state on a single screen. It also allows users to view results for 2016-2017, 2015-16 and 2014-15. <https://bit.ly/2Qq7xa4>

[EdSource's 2018 Smarter Balanced Test Results Page](#). Provides a searchable resource for exploring 2018 CAASPP results. <http://caaspp.edsource.org/>

[Assessment Fact Sheet](#). A one-page fact sheet about the SBAC summative assessments, developed by the CDE for families. <https://bit.ly/2F7bWxV>

[Online Practice Tests](#). Provides teachers and students access to online practice tests. <https://bit.ly/1nMHWZR>

[Smarter Balanced Digital Library](#). Offers educators subject- and grade specific resources for formative assessment during daily instruction. The site also allows users to rate materials and collaborate with their peers across the country. It is available to all local educational agencies serving grades K-12. <https://bit.ly/2PgUE4o>

[CDE Smarter Balanced Resources](#). Includes information about accessibility and accommodations, and resources such as presentations, frequently asked questions, and fact sheets. <https://bit.ly/2PLbPfk>

## Endnotes

- 1 The full SBAC acronym stands for Smarter Balanced Assessment Consortium.
- 2 All data for this brief is based on a CSBA Analysis of: California Department of Education, California Assessment of Student Performance and Progress. 2018 California statewide research file. Retrieved on Oct. 3, 2018 from <https://bit.ly/2DWpk2A>.

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February 2018

# Governance Brief

## English Learners in Focus

*The English Learner Roadmap: Providing Direction for English Learner Success*

by Laurie Olsen, Ph.D. and Julie Maxwell-Jolly, Ph.D.

### Introduction

In July 2017, the California State Board of Education adopted a historic new English learner education policy, the English Learner Roadmap. The Roadmap offers a vision and direction for English learner (EL) education that sets California on a new course that views the education of English learners as a system-wide responsibility, recognizes the need to provide EL students with a rich and challenging curriculum from early childhood to grade 12, and respects the value of English learners' primary language and culture. The Roadmap is not an additional policy, but acts as an overarching connector that provides guidance on how disparate elements in California's existing English learner education policies relate to each other in a coherent and comprehensive approach. When implemented in counties and school districts, the Roadmap holds promise of greater success for California's English learners.

In order to develop the Roadmap, Superintendent of Public Instruction Tom Torlakson appointed an English Learner Working Group composed of 32 leaders, practitioners, and EL experts from throughout California, including a representative from CSBA. Under the leadership of co-chairs Kenji Hakuta and Laurie Olsen, the group worked together over nine months to review the most recent research, consider how to build coherence across the many related policy and guidance documents that have implications for ELs, and together constructed the English Learner Roadmap policy.

### Elements of the Roadmap

This newest English learner policy is deliberately called a Roadmap because it offers direction and goals for educating California's 1.3 million ELs. The Roadmap Mission and Vision articulate the state's goals for ELs:

#### This brief will answer:

- » **What is the California English Learner Roadmap?**
- » **How are its principles different from former approaches to English learner education?**
- » **How can it help LEAs prepare English learners for 21st-century success?**
- » **What questions should local school boards explore as they seek to implement Roadmap policies and programs?**

#### *Vision*

*English learners fully and meaningfully access and participate in a 21st-century education from early childhood through grade 12 that results in their attaining high levels of English proficiency, mastery of grade level standards, and opportunities to develop proficiency in multiple languages.*

#### *Mission*

*California schools affirm, welcome, and respond to a diverse range of EL strengths, needs, and identities. California schools prepare graduates with the linguistic, academic, and social skills and competencies they require for college, career, and civic participation in a global, diverse, and multi-lingual world, thus ensuring a thriving future for California.*

The Roadmap includes a set of four interrelated research-based principles to guide local educational agencies (LEAs) on a pathway toward meeting the goals of the Mission and Vision. The English Learner Roadmap is intended for use in local planning to promote local capacity building and continuous improvement efforts. Unlike previous policies that have laid out prescriptive mandates for discrete EL programs, the Roadmap provides guidance for every level of the school system (state, county, district, school, and early childhood education) to take responsibility for implementing and strengthening programs and services aligned to the research-based principles. These principles are intended to guide all levels of the system towards a coherent and aligned set of practices, services, relationships, and approaches to teaching and learning that together provide a powerful and effective 21st-century education for California’s ELs.

## The Four Principles of the Roadmap

Underlying the EL Roadmap’s systemic approach is the foundational understanding that simultaneously developing English learners’ linguistic and academic capacities is a shared responsibility of all educators, and that all levels of the schooling system have a role to play in ensuring the access and achievement of the 1.3 million ELs who attend California schools.

### The four principles are:

- » Assets-Oriented and Needs-Responsive Schools
- » Intellectual Quality of Instruction and Meaningful Access
- » System Conditions to Support Effectiveness
- » Alignment and Articulation within and across Systems

These principles are research- and values-based. They build upon and connect to the foundation of numerous other policies and guidance documents including the *California English Language Arts/English Language Development Framework*, the State Superintendent’s *Blueprint for Great Schools 1.0 and 2.0*, the Seal of Biliteracy, Proposition 58 (Education for a Global Economy) legislation, foundational legal precedents, and other state policy and guidance documents.

### Principle 1: Assets-Oriented and Needs-Responsive Schools

*Preschools and schools are responsive to different English learner strengths, needs, and identities, and support the socio-emotional health and development of English*

*learners. Programs value and build upon the cultural and linguistic assets students bring to their education in safe and affirming school climates. Educators value and build strong family, community, and school partnerships.*

The first principle of the Roadmap sets forth the belief and understanding that the languages and cultures ELs bring to their education are assets for their own learning and important contributions to learning communities. The principle states that these assets are to be valued and built upon in culturally responsive curriculum and instruction, and in programs that support, wherever possible, the development of proficiency in multiple languages. A significant contrast to “one-size-fits-all” curriculum and instruction in the past, this principle makes clear that a single English-learner program approach is unlikely to adequately address the diverse needs of an LEA’s EL population. The principle also calls upon educational leaders to learn more about the different needs of this group of students (e.g., of newcomers and Long-Term English Learners), and design approaches to meet those needs. It further suggests that attention must be paid to the climate and culture of schools to ensure that campuses are affirming, inclusive, welcoming, and safe for immigrant and EL students. Finally, principle 1, calls upon educators to value and build strong family and school partnerships.

**Principle 1 Example: Anaheim Union High School District (AUHSD) recognizes the important language and cultural assets of students and their families.** The district enrolls more than 30,000 seventh-12th grade students representing more than 50 languages. The district’s recognition that students and their families bring a wealth of experiences and wisdom to the educational table is reflected in its approach to supporting the social and academic development of students. The AUHD’s educational goals are college, career, and life success—and for AUHSD, this means knowing every student.

The district’s programs build literacy in the students’ home language through multiple language development options that culminate in the State Seal of Biliteracy. The AUHSD teaching approach ensures that all domains of language are taught throughout the entire curriculum, intentionally providing all students with speaking and writing opportunities using academic language, with a special focus on the needs of Long-Term English Learners. The district’s mentoring program helps students prepare for their futures by enabling personal connections with teachers, businesses, and community partners. In many AUHSD schools, “Ted Talk”-type performance tasks deepen students’ oral language skills and enhance their civic engagement.



AUHSD fosters a climate that is inclusive and supportive. Many students come from poverty, have been traumatized by refugee experiences, have witnessed violence, and do not have access to healthy socio-emotional support networks. The district believes that all students and families should have a sense of belonging, which requires building a culture of inter-connectedness and compassion for each other and for the greater good. The innovative Parent Learning Walks program engages parents as partners of the school community, empowering them to advocate for their children and to play a more active and robust role in their child's education.

## **Principle 2: Intellectual Quality of Instruction and Meaningful Access**

*English learners engage in intellectually rich and developmentally appropriate learning experiences that foster high levels of English proficiency. These experiences integrate language development, literacy, and content learning as well as provide access for comprehension and participation through native language instruction and scaffolding. English learners have meaningful access to a full standards-based and relevant curriculum and the opportunity to develop proficiency in English and other languages.*

Principle 2 focuses on curriculum, instruction, and the promise of a rigorous and relevant curriculum for improving EL achievement—provided that students have the support they need in order to participate in, comprehend, and have full access to such curriculum. This principle embraces the new California English Language Arts/English Language Development Standards and Framework. It provides the policy umbrella for the Framework's commitment to language development through all academic content and integrated across the curriculum, including integrated English-language development (ELD) and designated content-based ELD. Mirroring the Framework, the Roadmap calls for teaching pedagogy that emphasizes student engagement, interaction, discourse, inquiry, and critical thinking—with the same high expectations for ELs as for all students. To support such instruction, the Roadmap highlights the importance of rigorous instructional materials, going beyond the Framework to articulate the importance of providing full access to the curriculum, including A-G courses as well as the arts and sciences. Finally, Principle 2, calls upon schools to provide instruction and support in a student's home language, where possible, as a means for students to access curriculum content, build English-language skills, and develop high levels of literacy and proficiency in their first and second languages. This necessitates a range of language-acquisition programs to be

made available to ELs in order to overcome the language barrier, develop proficiency in English, ensure access to the curriculum, and provide options to develop skills in multiple languages.

Teachers need a variety of tools to ensure that EL students learn the content of a full and rigorous curriculum and that they develop English-language fluency. While not the only approach, the value of using English learners' first language for instruction is strongly supported by research. After the passage of Proposition 58, school districts are free to use EL students' primary language and culture as part of an overall approach for ensuring their success.

***Principle 2 Example: Oak Grove School District has invested in the rigorous preschool through grade 3 SEAL program to support EL success.*** The district is located in the San Francisco Bay Area and serves more than 11,000 students. Half of the students are Latino, while 20% are Asian, 20% are White, 5% are Black, and 5% are other ethnicities. Thirty percent of of students are ELs, and 20% are Fluent-English-Proficient (FEP).

In 2013–14, the district piloted the Sobrato Early Academic Language (SEAL) model to increase early EL language and content learning and help EL students avoid becoming Long-Term English Learners. SEAL is a research-based, language-rich model designed to build the capacity of educators to powerfully develop the language and literacy skills of young EL children from preschool through third grade. Working through standards-based, teacher-created, integrated thematic units, children develop language and literacy in and through learning about the world. Teachers receive three years of support through a series of professional development workshops, job-embedded coaching, and collaboration in grade-level teams. The support focuses on English Language Arts (ELA), ELD, Next Generation Science Standards, and Social Studies standards using the lens of research on the development of students taught in more than one language.

Early evidence of improvement motivated district leaders, principals, and teachers to adopt a coherent approach by expanding SEAL across the districts' 14 schools—identifying SEAL as their core strategy for transitioning to the new standards while addressing the needs of young ELs.

An external evaluation found that SEAL changed teacher practices to be more aligned with standards, increased their use of research-based language development strategies, produced higher levels of curriculum articulation, increased student engagement, and had a statistically significant impact on student development in language, literacy, and cognition.

### **Principle 3: System Conditions that Support Effectiveness**

*Each level of the school system (state, county, district, school, and early childhood education) has leaders and educators who are knowledgeable of and responsive to the strengths and needs of English learners and their communities, and utilize valid assessment and other data systems that inform instruction and continuous improvement. Resources and tiered support are provided to ensure strong programs and increase the capacity of teachers and staff to build on the strengths and meet the needs of English learners.*

Effective, comprehensive, and coherent programs and services for ELs can only occur if the system supports building the necessary skills for staff to implement them. This involves hiring and building leaders with the skills and understanding to establish locally appropriate goals and commitments to English learners' curriculum access, growth toward English proficiency, academic achievement, and participation. It also involves providing support and ongoing preparation for leaders to ensure that a focus on progress towards these goals and continuous improvement is maintained across the system. Selection of leaders, leadership development supports, and structures for monitoring progress are part of the picture—but all of this also requires that the school system invest adequate resources in the programs and services to meet EL needs. One key area of investment must be professional development and collaboration time for teachers to plan for both integrated and designated ELD and to learn dual-language pedagogy. And, for those districts moving ahead to implement dual-language and bilingual programs in response to the new policies in California, a high priority should be plans to address the shortage of bilingual teachers and to build a pipeline of educators with skills in addressing the needs of ELs.

***Principle 3 Example: Ontario-Montclair School District has a robust EL instruction and monitoring system at all levels*** that has yielded positive results including higher reclassification rates than both the County of San Bernardino and the State. Ontario-Montclair is the largest PreK-8 district in Southern California with 32 schools serving more than 21,665 students—7,468, or 34.5%, of whom are ELs. The district uses its Local Control and Accountability Plan (LCAP) to articulate its approach for building administrator and teacher capacity to ensure English learners' access to content and development of English proficiency.

Both the district LCAP and each school's plan for student achievement include details of the district-wide monitoring system. This system includes benchmarks for expected annual growth that help the district support schools in taking appropriate steps for ELs who are not progressing

toward English-language proficiency and content knowledge goals.

Instruction is monitored through administrative walk-throughs focused on the implementation of teachers' professional development, and Long-Term ELs are monitored through one-to-one conferences. At the site and teacher level, EL data is evaluated using both summative and formative assessments that drive instruction. District-wide data analysis protocols are conducted school-by-school at regular leadership team meetings to help administrators compare EL achievement with that of other students. Teachers use this data during Professional Learning Community meetings to plan specific interventions for remedying any academic gaps that ELs may show. This continuous cycle of evaluation and monitoring, driven by the LCAP, allows concentric systems at both the district and site levels to support targeted attention to improving outcomes for ELs.

### **Principle 4: Alignment and Articulation within and across Systems**

*English learners experience a coherent, articulated, and aligned set of practices and pathways across grade levels and educational segments beginning with a strong foundation in early childhood and continuing through to reclassification, graduation, and higher education. These pathways foster the skills, language(s), literacy, and knowledge students need for college and career readiness and participation in a global, diverse, multilingual 21st-century world.*

Principle 4 recognizes that language development is a long process that requires articulated pathways across the grade levels and system segments—beginning with a strong foundation in early childhood and continuing through to reclassification, graduation, and higher education. It further affirms that California's goals for ELs go beyond English proficiency and reclassification, aiming to ensure that ELs graduate and are prepared for higher education and civic participation.

***Principle 4 Example: The governing board of the Los Angeles Unified School District (LAUSD)*** passed a resolution in April 2017, "Preparing LAUSD Students for The Global Economy: Building a Dual Language Immersion Pilot in Early Childhood Education," (Res 076-16/17) which initiated a set of dual-language programs in the district's preschools and transitional kindergartens.

Tied to a strategic plan objective to build a solid foundation for early learning in order to meet the goal of a 100% graduation rate, the resolution cited research on

how high-quality early education impacts later success. It further cited the benefits of bilingualism and the passage of Proposition 58 as evidence of high demand for opportunities and pathways that develop students' fluency in multiple languages. The pilot is meant to inform the expansion of early childhood education dual-immersion programs throughout the district.

Two months later, in June 2017, the board passed an additional policy, a sweeping "Commitment to Biliteracy for All" (Res-103-16/17). This resolution established that attaining bilingualism and biliteracy for all students is a key goal of LAUSD, beginning with the kindergarten class entering the district in 2018–19 (class of 2032) as the first class to graduate biliterate.

## The English Learner Roadmap: Important Shifts in Direction

The English Learner Roadmap is a major shift for California schools. Recognizing these shifts is important as LEAs reorient programs and services:

FROM Old Policy and Current Practice	TO New California EL Roadmap Policy
Prescriptive, mandate-driven, compliance focus on exactly what schools need to do	Setting a vision and mission for California schools, with research-based principles to guide local planning and continuous improvement
K-12 system focus	Explicit recognition of early childhood education as a crucial part of the system
English learners as a Title III issue, or isolated compliance issue—the responsibility of ELD teachers and EL specialists	English learners as central to practice, woven throughout the LCAP—everyone's responsibility
Focus on English proficiency only	Focus on English proficiency plus proficiency in multiple languages—and recognition of the role of home language in supporting English and overall literacy
One-size-fits-all programs and approaches	Responsive to diverse EL needs
College and career readiness as goal	College and career readiness AND preparation for civic participation in a global, diverse, multilingual 21st-century world
Focus on lack of English proficiency, i.e., what students don't have and deficiency orientation	Value and build on the linguistic and cultural assets students bring using a culturally responsive curriculum and instruction
No mention of the school climate, or of commitment of schools to be welcoming, safe, and inclusive of English learners	Focus on safe, affirming, and welcoming school climate and culture
ELD as where/how English learners develop English proficiency	Language development in and through content, integrated across the curriculum (Integrated ELD) along with Designated ELD
Structured English Immersion as default program	English learners have choice of research-based language-acquisition programs—including options for developing proficiency in multiple languages
No focus on knowledge and skills of leadership and administrators regarding ELs	Explicit commitment to leadership knowledgeable of and responsive to English learners

## What can School Boards do to Support Implementation of the Roadmap?

The Roadmap guides planning and direction for improvement of local programs and services for ELs. In order to achieve the Roadmap's promise, local policies and guidance to schools should be updated to align with its principles. For example, policies regarding goals for ELs, as well as resolutions related to preparation for 21st-century participation and valuing the diversity of the community may need updating.

An important step toward incorporating the Roadmap principles into local programs is to use them as a guide in developing district and county LCAPs. The principles include all eight state priority areas on the LCAP, suggesting the kind of programs, services, and approaches that should be considered in order to ensure the needs of English learners are addressed in the plan. In addition, governing boards can use each principle as a lens for looking across the LCAP priority areas to ensure there is coherence and comprehensiveness in how English learners' needs are being incorporated.

While policies, guidelines, and plans are important, their implementation is key to ensuring positive results for students. In order to implement the EL Roadmap, LEAs should address a number of issues that will help ensure that its principles become actions. To do this, boards should explore the following questions:

1. What are our current vision and goals for English learners? Do they include the principles laid out in the Roadmap?
2. How can we align our vision and goals for EL students with the EL Roadmap?
3. How will we align resources with this vision and goals? What are the areas where resources are most needed (e.g., teacher retention and recruitment, professional development for *all* staff, extra learning time, etc.)?
4. How do we inform and build partnerships with all members of the school community to support the vision and goals?
5. How will we monitor efforts to ensure that the strategies employed by district and county office of education (COE) staff are successful? What are appropriate milestones and progress toward meeting goals?
6. What attitudes, skills, and experience do district and COE leaders need in order to support and pursue a vision and goals that are based on the Roadmap?

## Conclusion

The California English Learner Roadmap provides guidance on how to create a coherent and comprehensive approach to English learner education that supports their success in school and beyond. As LEAs throughout California align their services to this Roadmap, a powerful new trajectory is set for the state—one that delivers on the promise of educational equity and access for English learners and fosters a talented, well-educated, multilingual, and multicultural population with enormous potential to contribute to the state's economic and social strengths.

## CSBA Resources

**English Learners in Focus: Expanding Bilingual Education in California after Proposition 58** (3/17). <http://bit.ly/2zDTU1C>

**English Learners in Focus: Ensuring High-Quality Staff for English Learners** (7/16). <http://bit.ly/2yyvfbE>

**English Learners in Focus: Updated Demographic and Achievement Profile of California's English Learners** (9/16). <http://bit.ly/2iUddKq>

**English Learners in Focus: The Promise of Two-Way Immersion Programs** (9/14). <http://bit.ly/2zVucXB>

**GAMUT Online (Subscribers Only)**. Sample Policies and Administrative Regulations. [www.gamutonline.net](http://www.gamutonline.net)

- » AR 4112.22 – Staff Teaching English Language Learners
- » BP/AR 6174 – Education for English Language Learners

## External Resources

**California Department of Education EL Roadmap webpage.** Includes the policy, press releases, frequently asked questions, a guidance document, an LEA self-assessment rubric for determining areas of strength and need in services and programs for English Learners, and other resources for implementation. <http://www.cde.ca.gov/sp/el/rm/>

**Prop. 58 Has Passed! Now What?** Fact sheet by the California Association for Bilingual Education (CABE) and Californians Together. <http://bit.ly/2GsFhiT>

**Multiple Pathways to Biliteracy.** Report by Californians Together. <http://bit.ly/2EliaWM>

**California Association for Bilingual Education (CABE) Resource Center.** <http://www.resources.gocabe.org/>

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# FactSheet *August 2018*

## Proposition 58 Regulations

by Manuel Buenrostro

### Introduction

On July 1, 2018, the California Department of Education’s regulations for implementing Proposition 58—also known as the California Education for a Global Economy Initiative—took effect. Proposition 58 was approved by an overwhelming majority of California voters and empowers school districts and county offices of education (COEs) to establish programs for English learners that promote proficiency in multiple languages and leverage students’ home language as an asset.

These regulations are designed to clarify the initiative and to help schools, districts, and COEs implement its provisions. For more information on programs and strategies to support English learners, visit the CSBA English learner webpage at [www.csba.org/englishlearners](http://www.csba.org/englishlearners). There you will find several briefs on English learner education, including a [recent brief describing the English Learner Roadmap](#). The Roadmap was designed by practitioners, researchers, and others to help local educational agencies develop and implement effective programs for English learners.

### Definitions

The regulations provide key definitions related to English learner instruction:

- » **Designated English Language Development:** Instruction provided at a time set aside during the school day for focused instruction on the English Language Development (ELD) standards. The goal is to assist English learners in developing the English-language skills needed to learn academic content in English.
- » **Integrated English Language Development:** Instruction in which the ELD standards are used

### In this fact sheet you will find:

- » **Key definitions;**
- » **Language acquisition program requirements;**
- » **Requirements for updates to annual parent and guardian notifications;**
- » **Guidelines for establishing a process to document and collect requests by parents and guardians to establish a language acquisition program;**
- » **Guidelines for stakeholder engagement in the LCAP process; and**
- » **Questions and resources to support board members.**

alongside the academic content standards. Integrated ELD is based on instructional strategies that ensure that English learners both learn English and access academic content through instruction in English.

- » **Language Acquisition Programs:** Programs designed to ensure that English learners gain English proficiency as rapidly and effectively as possible. These programs provide instruction on the academic content and ELD standards, through both designated and integrated ELD. Programs include those with instruction in English and another language, such as dual language (two-way

immersion), and transitional and developmental programs; and those that do not include another language, such as Structured English Immersion programs. Structured English Immersion programs are those where nearly all instruction is through the English language. All language acquisition programs require teachers who have skills and knowledge that allow them to make academic content accessible to English learners through the English language at the same time that they are learning English.<sup>1</sup>

Some of these language acquisition programs can also provide instruction and benefits to native English speakers, such as dual language immersion programs. For more information on the different types of language acquisition programs, see “English Learners in Focus: Expanding Bilingual Education in California after Proposition 58.”

## Requirements for Establishing Language Acquisition Programs

In establishing a language acquisition program, a school district or COE must consult with school staff—including teachers and administrators with the required authorizations to provide or oversee programs and services for English learners—regarding the design and content of the program. In addition, parents and guardians, staff, and other stakeholders must be consulted during the Local Control and Accountability Plan (LCAP) process (see *Stakeholder Engagement in LCAP Process*, page 3).

All language acquisition programs must meet the following program requirements:

- » Be designed using evidence-based research;
- » Include both Designated and Integrated ELD (see *Definitions*, page 1);
- » Be allocated sufficient resources to be effectively implemented (including, but not limited to, certificated teachers with the appropriate authorizations, instructional materials, and professional development), and to provide adequate opportunities for parent and community engagement to support the program goals; and
- » Within a reasonable period of time, lead to:
  - › Grade-level proficiency in English, and, when the program model includes instruction in another language, proficiency in that other language; and
  - › Achievement of the academic content standards in English, and, when the program model includes

instruction in another language, achievement of the academic content standards in that other language.

While, at a minimum, a school district or COE must provide a program of Structured English Immersion for English learners, it may elect to instead provide another language acquisition program. Regardless of the type of program, they must all include Designated and Integrated ELD as previously stated.

## Annual Parent and Guardian Notifications

In the annual notices provided to parents and guardians when they enroll their child at the beginning of the academic school year (see Education Code 48980 and 48981), a district or COE must include information on its language acquisition programs, and a description of the process for parents and guardians to request a language acquisition program for their child. This notice must be provided to parents and guardians that enroll their child after the beginning of the school year, and notice may also be provided at additional times throughout the year.

**Specific to language acquisition programs for English learners**, the notice shall include:

- » A description of the programs provided;
- » Identification of any language to be taught in addition to English, when the program includes instruction in another language;
- » Information about the program requirements (described in the previous section); and
- » The process to request establishment of a language acquisition program not currently offered at the school.

### Notifications in Parents’ and Guardians’ Home Language

According to Education Code 48985, if 15 percent or more of the students enrolled in a school speak the same language other than English, then all notices, statements, or records must be sent to the parents and guardians of such students in their primary language (in addition to English). Enrollment data is based on census data submitted to the California Department of Education in the preceding year. This requirement applies to all required and optional notices referenced in this fact sheet.

## Parent and Guardian Requests to Establish a Language Acquisition Program

A school district or COE must put a process in place for its schools to receive requests from parents and guardians to establish a language acquisition program that is currently not offered at the school, and to respond to such requests. This process must be followed by each school, even when the school district or COE provides the requested language acquisition program at another school. Such requests must come from parents and guardians of students enrolled in the school or of students who are expected to attend the school the following year.

### School Requirements

The school district or COE process must require each school to make a written record of each request—including verbal requests—and keep them for at least three years from the date they were submitted. Schools must also assist parents and guardians in clarifying requests. The written record for each request must include at least:

- » The date of the request;
- » The names of the parent or guardian and student;
- » A general description of the request; and
- » The student's grade level on the date of the request.

Each school shall monitor the number of parent and guardian requests for language acquisition programs on a regular basis and notify the district or county superintendent or designee immediately when the threshold of requests for the same or substantially similar type of language acquisition program is reached. The threshold is parents and guardians of 30 students enrolled in the school or of 20 students in the same grade level enrolled in the school. In addition, requests for a multilingual program from parents and guardians of students who are native English speakers must be considered in the threshold.

### School District and County Office of Education Requirements after Threshold

When the threshold for parent and guardian requests specified above is met, the school district or COE must take the following actions:

- » **Within 10 school days, provide a written notification of the requests** for a language acquisition program

to the parents and guardians of students attending the school, the school's teachers and administrators, and the English learner parent advisory committee and parent advisory committee of the school district or COE.

- » **Identify costs and resources necessary** to implement any new language acquisition program, including but not limited to certificated teachers with the appropriate authorizations, instructional materials, professional development for the proposed program, and opportunities for parent and guardian, and community engagement to support the proposed program goals; and
- » **Within 60 calendar days, determine whether implementation of the requested program is possible**, and provide a written notice of this determination to the parents and guardians of students attending the school, and the school's teachers and administrators:
  - » In a decision to implement a language acquisition program at the school, create and publish a reasonable timeline of actions necessary for implementation.
  - » In a determination that it is not possible to implement the requested program, provide a written explanation of the reason(s) the program cannot be provided, and possibly offer an alternate option that can be implemented at the school.

## Stakeholder Engagement in LCAP Process

As part of the development of the LCAP and annual updates, a school district or COE must inform and receive input from stakeholders (including parents and guardians, students, teachers, administrators, other school staff, and interested members of the public), the English learner parent advisory committee (if the body is required by law), and the parent advisory committee on its existing language acquisition programs, and the possibility of establishing other programs. The process for informing stakeholders and receiving input may include surveys, forums, and meetings with school advisory committees or other groups representing stakeholders.

In addition, prior to the adoption of an LCAP or update to an LCAP, the school district superintendent or county superintendent must include a written response to the input received from the English learner parent advisory committee and parent advisory committee of the school district or COE.



## Questions for Board Members to Consider

1. What are the language acquisition programs for English learners in the district or COE, and do they meet the requirements outlined in these regulations?
2. Do the annual parent and guardian notifications include the newly required information regarding language acquisition programs?
3. What are the procedures in each school for collecting, responding to, and maintaining requests by parents and guardians to establish language acquisition programs?
4. How is stakeholder engagement on language acquisition programs incorporated within the LCAP process?

## Resources

**CSBA Webpage on English Learners.** Includes the “English Learners in Focus” briefs and other resources, available at [www.csba.org/englishlearners](http://www.csba.org/englishlearners).

- » [The English Learner Roadmap: Providing Direction for English Learner Success \(2/18\)](#).
- » [Expanding Bilingual Education in California after Proposition 58 \(3/17\)](#).
- » [Ensuring High-Quality Staff for English Learners \(7/16\)](#).
- » [Updated Demographic and Achievement Profile of California’s English Learners \(9/16\)](#).
- » [The Promise of Two-Way Immersion Programs \(9/14\)](#).

**GAMUT Online.** Includes the following sample policies and administrative regulations for subscribers, available at [www.gamutonline.net](http://www.gamutonline.net).

- » [AR 4112.22—Staff Teaching English Language Learners](#)
- » [BP/AR 6174—Education for English Language Learner](#)

**CDE Webpage on CA Education for a Global Economy Initiative.** Includes the full text of the Proposition 58 regulations (see *Amended California Education Code*), translations in Spanish, and other resources. Available at [www.cde.ca.gov/sp/el/er/caedge.asp](http://www.cde.ca.gov/sp/el/er/caedge.asp).

## Endnotes

- 1 According to Education Code 305(c), “School districts and county offices of education are also encouraged to provide opportunities to pupils who are native speakers of English to be instructed in another language to a degree sufficient to produce proficiency in that language. The non-English language should be at the discretion of the parents, community, and school, depending upon the linguistic and financial resources of the school community and other local considerations.” The Proposition 58 regulations define these opportunities as “language programs.” The regulations require school districts and COEs that offer or propose to offer such programs, to (1) establish a process for schools to receive and respond to input from parents and guardians, and other stakeholders regarding the non-English language in which instruction is provided; (2) inform and receive input from stakeholders on existing language programs, and the possibility of establishing additional language programs, as part of the development of the LCAP and annual updates; and finally, (3) include information about any existing language programs in the annual notices that school districts or COEs provide to parents and guardians at the beginning of the academic school year. Information on language programs must include the language(s) to be taught and may include program goals, methodology, and evidence of effectiveness. The notice must also include a description of the process for parents and guardians to request a language program (note that the process for language programs does not contain the same requirements as that for language acquisition programs).

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# Governance Brief

## Supporting STEM Access, Equity, and Effectiveness

*The Path to Full Implementation of the California Next Generation Science Standards*

By Eric Hoyer

### Introduction

Science literacy for K-12 students is crucial to their success in a world in which jobs increasingly require science skills and competencies: critical thinking, experimentation, and problem-solving, to name a few. The percentage of jobs in California requiring a STEM (science, technology, engineering, and math) background grew by 19 percent from 2008 to 2018 and the state projects it will need more than one million jobs in STEM fields over the next decade.<sup>1</sup>

Whether California can fill this gap will depend a great deal on how well students learn the practices, skills, and mindsets of scientists and engineers. The Next Generation Science Standards (NGSS) are meant to do just that: train students to think like scientists by using teamwork, brainstorming, and problem-solving skills to answer questions about the world around them. The State Board of Education (SBE) adopted NGSS in 2013 and the Science Framework for California Public Schools (also known as the Science Curriculum Framework) was written to support implementation of NGSS in 2016. The first operational assessments designed to support the standards will take place in 2018–19.

This brief offers valuable information to district and county offices of education (also known as local educational agencies or LEAs) and board members to better understand NGSS, including best practices and challenges associated with their implementation.

### What are the California Next Generation Science Standards (CA NGSS)?

NGSS are standards with a purpose. The K-12 science content standards cover every grade and every scientific discipline, setting expectations for what students should

#### In this brief you will find:

- » A description of the Next Generation Science Standards (NGSS) and how they are different from previous science standards.
- » An overview of the current state of NGSS implementation including the new science assessment.
- » Information about the CA NGSS K-8 Early Implementation Initiative and some key best practices.
- » Common challenges in implementing the standards.
- » Tools that board members can use to ensure their district or county office of education is on the path to full implementation.

know and be able to do in the discipline.<sup>2</sup> The standards are further explained in the Science Curriculum Framework,<sup>3</sup> which “offers guidance for implementing content standards.”<sup>4</sup> The framework is used by teachers for professional development and to help visualize what NGSS instruction looks like in the classroom. In the absence of approved instructional materials, the Science Curriculum Framework has been especially important for developing NGSS-aligned lesson plans.

### *Definitions of Standards, Frameworks, and Instructional Materials<sup>5</sup>*

**Content Standards:** What students should know and be able to do in each subject at each grade. [Education Code (EC) Sections 60604-60618]

**Science Curriculum Framework:** Offers guidance for implementing content standards. Frameworks describe the curriculum and instruction necessary to help students achieve proficiency, and they specify the design of instructional materials and professional development.

**Instructional Materials:** Materials that are designed for use by pupils and their teachers as a learning resource and help pupils to acquire facts, skills, or opinions or to develop cognitive processes. Instructional materials may be printed or non-printed, and may include textbooks, technology-based materials, other educational materials, and tests. [EC Section 60010 (h)]

**State Adopted Instructional Materials:** Those instructional resources which the SBE has formally 'adopted' for use in the classroom. This action is required by the California State Constitution, Article 9 Section 7.5. There are no state instructional materials adoptions for grades nine through 12. LEA governing boards have the authority and responsibility under EC Section 60400 to adopt instructional materials for use in their high schools for grades nine through 12.

The NGSS Performance Expectations include three dimensions: science and engineering practices, disciplinary core ideas, and crosscutting concepts. NGSS represents a shift in mindset from the teacher as lecturer to the teacher as facilitator. The standards de-emphasize "cookbook" experiments that have a predetermined outcome and instead have students design and conduct their own exploratory experiments through which students gather data and draw conclusions. This is one example of an instructional shift that requires a retooling of how teachers think about teaching science. Consequently, the Science Curriculum Framework has been instrumental in helping teachers redesign their lessons and their approach to teaching science. Below are the definitions

of the three NGSS dimensions and how each dimension is used in an example of a performance expectation (PE).

Students who demonstrate understanding in the following example can: develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons. (MS-ESS1-1).

### **NGSS Dimensions<sup>6</sup>**

**Science and Engineering Practices (SEP):** *What scientists and engineers do*

**Definition:** Behaviors that scientists engage in as they investigate and build models and theories about the natural world and the key set of engineering practices that engineers use as they design and build models and systems

**As Presented in this PE:** Develop and use a model to describe phenomena.

**Disciplinary Core Idea (DCI):** *What scientists and engineers know*

**Definition:** Key organizing concepts, problem solving tools, or underlying principles of a discipline

**As Presented in this PE:**

- » Patterns of the apparent motion of the sun, the moon, and stars in the sky can be observed, described, predicted, and explained with models. (ESS1.A)
- » This model of the solar system can explain eclipses of the sun and the moon. Earth's spin axis is fixed in direction over the short-term but tilted relative to its orbit around the sun. The seasons are a result of that tilt and are caused by the differential intensity of sunlight on different areas of Earth across the year. (ESS1.B)

**Crosscutting Concepts (CCC):** *How scientists and engineers think*

**Definition:** Underlying themes that have value in all disciplines of science

**As Presented in this PE:** Patterns can be used to identify cause-and-effect relationships.

One of the benefits of NGSS is that they incorporate student learning within and across disciplines, making meaningful connections to English Language Arts (ELA), Mathematics, and other science courses. Results from the CA NGSS Early Implementers Initiative show promising evidence that science can bolster students' ELA skills. As WestEd authors note in their study of ELA and science integration, "a majority of teachers reported NGSS science increased motivation and engagement for all students, which in turn increased their enthusiasm for speaking, reading and writing."<sup>7</sup> Teachers reported that ELA skills such as reading informational texts and presenting knowledge and ideas were some of those most often integrated with science.<sup>8</sup> Similarly, research shows that science activities can encourage English learners to employ their new language and that Spanish-speaking students can take advantage of the many Spanish cognates in science vocabulary.<sup>9</sup>

Not only does NGSS instruction have built-in opportunities to reinforce ELA and math standards, the standards also support students' understanding of real-world jobs, which promotes connections to STEM careers and college pathways. "The Next Generation Science Standards constructed each performance expectation by linking concepts and practices that build coherently over time throughout K–12, thereby helping to ensure that students who meet the NGSS will be prepared to succeed in science courses in both two- and four-year institutions."<sup>10</sup> And for students who may not want to go on to complete studies at a four-year college and beyond, science-based jobs are still an option. Peter A'Hearn, a former regional director for the California

Science Teachers Association, writes that, "there are many high-paying jobs with good benefits and room for advancement that do not require college degrees. They *do* require certifications to advance and these are heavy on the science and math of the job."<sup>11</sup> Making such connections to careers will be essential to fulfill the promise of NGSS and can be done through activities such as STEM day or classroom visits from science professionals. For example, the Shasta County Office of Education (COE) sponsors an annual STEM career day called "Ignite Opportunity" that is open to ninth-grade students from six counties to learn about careers in science and the pathways to those careers.<sup>12</sup>

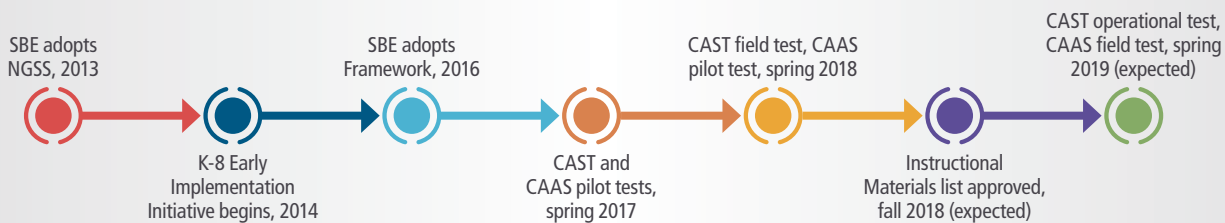
### How do NGSS differ from the previous science standards?

The previous California Science Standards were adopted in 1998. In the current version, NGSS gives more attention to science as a dynamic, creative, and collaborative process rather than learning science as a collection of facts that were found using a singular and linear "scientific method," disconnected from how real scientists and engineers do their work.<sup>13</sup> There is also greater opportunity to integrate ELA and math standards. For example, the notion of arguing based on evidence is integral to both ELA and scientific practice.<sup>14</sup> NGSS were designed to mutually reinforce skills across disciplines and grade levels using Performance Expectations.<sup>15</sup> Irvine Unified School District provides some examples of how PEs differ between the old and new standards for middle school in the table below.<sup>16</sup>

**Table 1**

1998 Middle School Science Standards	NGSS Middle School Science Standards
Distinguish between atoms and molecules	<b>Construct and use models</b> to explain that atoms combine to form new substances
Describe the difference between pure substances (elements and compounds) and mixtures	<b>Plan investigations</b> to generate evidence supporting the claim that one pure substance can be distinguished from another based on characteristic properties
Describe the movement of particles in solid, liquid, gas, and plasma states	<b>Construct an argument</b> that explains the effect of adding or removing thermal energy to a pure substance in different phases and during a phase change in terms of atomic and molecular motion

### NGSS timeline since 2013 adoption



## The current state of NGSS implementation

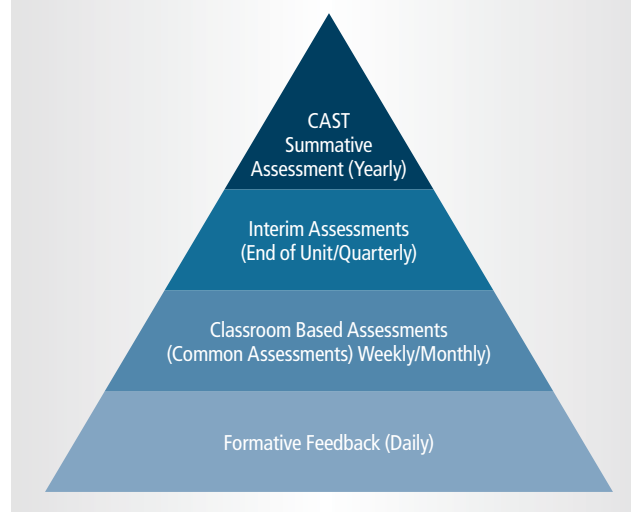
Although NGSS implementation in California began in 2013 with its adoption by the SBE, six years later, LEAs are still waiting for a list of approved instructional materials—due to be approved midway through 2018–19. Some LEAs may be able to forge ahead by developing their own materials. Those that lack the staffing capacity to conduct a materials review may be hampered and may opt to wait to purchase materials after the SBE releases its approved list, scheduled for late 2018. Notwithstanding this lack of an approved materials list and that materials adoption by LEAs has been uneven across the state, student assessment based on the new standards and the inclusion of the results of this assessment in the accountability system has continued to move forward. The assessment, the California Science Test (CAST), has been field tested with all eligible students and will be operational in spring 2019. Following the release of the 2018 California School Dashboard, CDE will begin development of a proposed Science Indicator on the Dashboard, which will be based on the results of the CAST (see following section).<sup>17</sup> Above is a timeline since the 2013 adoption of NGSS by the State Board.

## How will the new California Science Test assess student performance?

The CAST and the alternative assessment for students with special needs, the CAA for Science or CAA-S, were designed based on NGSS. As such, the assessments will promote the same types of learning as NGSS. Students will be tested in grades five, eight, and once in high school.<sup>18</sup> Considering that the CAST is new, schools are at various stages of NGSS implementation, and the approved materials list is forthcoming—it is expected that there may be a transition period to get an accurate sense of how students are faring in science. The CAST has three parts: (1) 32 to 45 standard items which may be multiple choice, drag and drop, or fill in the blank; (2) Two to three performance tasks; and (3) either another performance task or six or seven discrete items.<sup>19</sup> The assessment is designed to take approximately two hours. The CAST is meant to be a summative assessment for determining

what students have learned—not a periodic assessment for informing ongoing instruction during the school year. At the same time, the assessment results should inform teacher practices for the following year. **Figure 1** represents how the CAST factors into the different types of science assessments students are given during a school year:

**Figure 1: Balanced Assessment Pyramid<sup>20</sup>**



## LEA Implementation Indicators for NGSS

Achieve, Inc. is a nonprofit educational organization contracted by the 26 states that took the lead in implementing the new science standards. Achieve has developed materials and strategies to facilitate NGSS implementation in LEAs. One project has been to develop Implementation Indicators to help LEAs monitor their progress.<sup>21</sup> These indicators may be used to craft new or adapt existing strategies to prioritize science education and understand systemic issues associated with improving science outcomes.<sup>22</sup>

While there are 13 indicators, board members might find it helpful to delve into two examples that are particularly relevant to their role. See table 2 on next page.

**Table 2**

Strategy	Board action
<i>Community Communication</i>	<p><b>Give regular, clear updates on:</b></p> <ul style="list-style-type: none"> <li>» Implementation timeline</li> <li>» Changes to student work and classroom design</li> <li>» Current implementation challenges</li> <li>» Changes to formative and interim assessments</li> </ul>
	<p><b>Share information on:</b></p> <ul style="list-style-type: none"> <li>» Knowledge expectations at the end of each grade</li> <li>» How NGSS are different from previous science standards</li> <li>» How community can support NGSS</li> </ul>
	<p><b>Solicit feedback from parents through:</b></p> <ul style="list-style-type: none"> <li>» Board visits to school science night or LEA-wide science fair</li> </ul>
<i>Management</i>	<p><b>Establish a science leadership team (LEA office, educators, and administrators):</b></p> <ul style="list-style-type: none"> <li>» Leadership team should partner with other LEAs and other education networks to share information</li> </ul>
	<p><b>Create and publicize a science strategic plan that involves:<sup>23</sup></b></p> <ul style="list-style-type: none"> <li>» Educator and school leader professional learning; instructional material selection; assessment implementation; and funding and resources for sustainable implementation</li> </ul>

### What are some lessons from NGSS Early Implementer districts?

The K-12 Alliance and WestEd embarked on an NGSS Early Implementers Initiative in 2014 involving eight districts and two charter schools in California.<sup>24</sup> They have published several reports on their progress. Highlighted below are two of the best practices particularly relevant for board members.

**Support the Development of an LCAP Committee for NGSS.** If science is to be an LEA priority, it needs to be incorporated into the Local Control and Accountability Plan (LCAP). The LCAP provides visibility, accountability, and funding for a district’s strategic goals. An educator from one of the Early Implementer districts remarked in the WestEd annual report that having an NGSS LCAP Committee “allowed the voice of science to be heard more clearly and more often.”<sup>25</sup> This committee should involve educators and administrators and educate them on how to use LCAP funds to support NGSS. As one project director noted, being a part of the LCAP process was being

“at the right place, at the right time, with a plan.”<sup>26</sup> Board members can play an important role in encouraging educators to take part in the LCAP process.

**Support Teacher and Administrator Professional Learning.** NGSS require a change in educator mentality from that of a “sage on the stage” to a “guide on the side.” This change cannot happen simply through an isolated workshop or webinar. Deeper teacher learning involves sustained duration, expert support and coaching, and utilizes active learning.<sup>27</sup> Furthermore, getting schools on board with teacher professional learning will require principal and administrator professional learning to be able to properly support teachers. For example, the K-12 Alliance concluded that “in the absence of explicit ‘permission’ from their administrators, some Teacher Leaders were unwilling to experiment with NGSS in their classrooms.”<sup>28</sup> Principal professional development can create the conditions for teacher success and should be considered when drafting a district professional learning budget.

## What are some of the challenges with implementing NGSS?

### Instructional Materials and the Williams Act

The State Board is scheduled to release an approved list of instructional materials for K-8 by December 2018. LEAs will be responsible for reviewing materials for grades 9-12 to ensure they are NGSS-compliant. Unlike the older standards, there will be more flexibility if LEAs wish to use materials outside of the approved SBE list.<sup>29</sup> No formal waiver process will be in place. Teachers may use open source/online and free materials to teach NGSS if they wish. Teaching NGSS-compliant content will require more time on the part of LEAs due to this flexibility. To aid this transition, NextGen TIME is a resource that educators may use to review materials for their alignment with NGSS.<sup>30</sup>

Educators looking for NGSS-aligned textbooks may find that many of the available texts are based on the older standards. Achieve, Inc. has developed a guide for educators to sort through some of the NGSS-related claims made by textbook publishers.<sup>31</sup> School board members can play an important role by setting benchmarks and a timeline for timely adoption of materials as an LCAP goal. Communication with the county office of education will be essential to ensure a successful rollout of these materials. For CSBA members, Sample Board Policy 6161 has some general guidance on the adoption of instructional materials including ensuring the diversity of an advisory committee for this purpose.<sup>32</sup>

Board members should be familiar with the Williams Act, which mandates that all students in a class have access to current instructional materials. If materials are online, schools need to ensure that students have access to the internet outside of class (public library or school library computer access is not enough) or that a printed reproduction/PDF is provided. Schools can assist with the cost of home internet access, provide devices, and/or provide copies; however, printed copies are not enough to make up for a physical textbook shortage in class. The county office of education is responsible for ensuring that the district is complying with the Williams Act.<sup>33</sup>

### Funding for Professional Learning

The 2018–19 state budget included nearly \$400 million for STEM promotion, including teacher recruitment, but no funds were earmarked to provide science teachers with professional learning on NGSS. Jessica Sawko, executive director of the California Science Teachers Association, says that without dedicated funds, “It means that a lot of that

work to advocate for using funds [for professional development] is going to have to happen at the local level.”<sup>34</sup> While instructional materials are an important part of the equation, selecting NGSS instructional materials, designing experiments, and teaching students to think like scientists all depend on teacher professional learning. As a recent post in *Classroom Science* argued, “just because the LCAP tells your district or local school site administrators to consider NGSS implementation in their spending plan, and the Dashboard reports what your district is doing, it doesn’t mean your administrators have a good idea of how much to spend or what to spend it on.”<sup>35</sup> Board members must take an active role in soliciting educator and administrator input so that NGSS materials and support is properly funded.

One possible source of funding are Student Support and Academic Enrichment Grants, part of the Every Student Succeeds Act (ESSA) under Title IV-A. ESSA is a wide umbrella of funds that can support STEM education and NGSS implementation in various ways. ESSA funds can support technology infrastructure, which is a barrier to access for many students. Funds can be used to support a well-rounded education, which includes STEM and computer science support. ESSA funds can also be redirected to Title II to support teacher training.<sup>36</sup> Each district will receive at least \$10,000 under Title IV-A for 2018–19 and while this may be insufficient to support professional learning needs, it may pool funds with other districts or county offices of education to develop consortium resources such as a professional learning network or an interdistrict professional learning day. The county office of education is a good resource to coordinate and promote interdistrict events.

### LEA Science Course Requirements and Equity

A glaring issue for many LEAs in NGSS implementation is that the new standards necessitate three science courses in high school while many LEAs only require two courses for graduation. Beyond course requirements is the issue of access to science courses. According to Children Now, 37 percent of California public high schools do not offer physics and 25 percent do not offer chemistry. The most recent science assessment in 2015 also showed disparities among student groups with 46 percent of white students showing proficiency in science while only 13 percent of African-American students and 10 percent of Latino students demonstrating proficiency. California, by the most recent measure, ranks 42nd in student performance in science.<sup>37</sup> Access to science courses will be crucial to bring California up to the national standard and fill the growing need for STEM jobs in the world’s fifth-largest economy.

## What more can board members do to ensure their LEA is on the path to full NGSS implementation?

While board members may use the 13 District Implementation Indicators to gauge their LEA's progress, both Science Partnership and San Diego Unified School District have developed some strategic planning tools that may prove useful.

### Develop a Plan

Science Partnership, a multiyear collaboration that includes the Alameda COE, Cal State East Bay, and the California Science Project, developed a *Guide to District Action for NGSS*.<sup>38</sup> Its recommendations for an effective NGSS planning process are to:

- » Designate a facilitator who is knowledgeable about both the NGSS and LEA processes.
- » Involve LEA and site administrators, teachers, and community members, so that action plans will have strong stakeholder buy-in and coherence with other initiatives.
- » Focus on one readiness phase at a time so as not to overwhelm stakeholders. This can be done in smaller committees, depending on the organization of the LEA.
- » Start by grounding the conversation in the current state of the LEA, and then move forward on decisions for the future.
- » Begin with areas of the LEA that are more advanced, then scale out from there. For example, one grade band may be more established in terms of leadership teams, progressions, and professional development, so it makes sense to start with planning for that grade band before tackling the other grades.
- » Integrate objectives with the overall vision of the LEA and align NGSS implementation with other initiatives as much as possible.

### Set Goals

San Diego USD, one of the Early Implementer Districts, has developed district-level goals that provide an example of how to support NGSS implementation.<sup>39</sup>

#### Goal 1 Closing the Achievement Gap

- » Elementary schools ensure adequate (amount and configuration) time provided for NGSS learning which includes a full year of science offered every year
- » In middle (6-8) and high school, students receive a full course of NGSS instruction
- » Ensure TK classrooms have access to science learning opportunities
- » Develop and implement LEA-wide science content formative and varied assessments/benchmarks to provide student learning data and inform classroom instruction
- » Middle and high schools ensure that course admittance is determined by appropriate measures (e.g. math scores should not be used for science course admittance)
- » Provide access to science courses for students with behavioral issues
- » Provide targeted support services to help high-needs students engage in and succeed in science coursework
- » Elementary schools ensure interventions and pull-out programs do not happen during science instruction

#### Goal 2 Access to a Broad and Challenging Curriculum

- » LEA engages in NGSS implementation planning and documents the resulting plan with annual goals and objectives
- » Ensure all classrooms have resources to order/replenish science materials/consumables at end of year

#### Goal 3 Quality Leadership, Teaching, and Learning

- » Provide ongoing and regular professional learning on K-12 NGSS
- » Provide targeted on-going professional learning for K-12 teachers to develop skills in integrating CCSS and NGSS



#### Goal 4 Positive School Environment, Climate, and Culture—with Equity at the Core and Support for the Whole Child

- » No specific recommendations

#### Goal 5 Parent and Community Engagement with Highly Regarded Neighborhood Schools that Serve Students, Families, and Communities

- » Provide an LEA NGSS leadership team that includes teachers, administrators, parents, and community members
- » Ensure students have access and provide resources and supports to science-related enrichment activities that go beyond NGSS classroom instruction (science family nights, festivals, special electives, clubs, outdoor experiences, etc.)
- » Increase the number and percentage of students from underrepresented groups who participate in science enrichment programs

#### Goal 6 Well-Orchestrated LEA-Wide Support Services and Communications

- » No specific recommendations

## Conclusion

Board members should expect the full transition to NGSS to take several years of planning and reforms that address curriculum, teaching practices, instructional materials, and assessments.<sup>40</sup> This requires a commitment to teacher and administrator professional development and giving them time to make the transition to the three-dimensional framework of NGSS. Course sequences in middle and high school will need to be reviewed to determine the best options for the LEA to meet NGSS and University of California and California State University A-G entrance requirements. Board members can work to include teachers and the community in the planning process, provide funding for professional development and materials, and ensure that superintendents elevate science's profile in the LEA.

## Questions for Board Members

- » What might our LEA do to ensure that deep professional learning in science is offered for teachers and administrators?
- » What is our LEA's plan for reviewing NGSS instructional materials? How are we communicating that with schools?
- » What will be our LEA's strategy for communicating the CAST results to parents? How will we contextualize the results?
- » Which schools or groups are at risk of receiving inequitable resources in science due to lack of staffing, courses, materials, or learning experiences?
- » What are our superintendent and principals doing to promote STEM? Could a goal be set for LEA-wide events per year dedicated to STEM? How might our county office of education promote our STEM events?
- » In addition to the CAST, how can our LEA determine whether efforts to teach based on the new standards are helping students meet the NGSS goals?

## Additional Resources

**CSBA Research and Policy Briefs.** Includes governance briefs and fact sheets on pertinent educational topics, available at [bit.ly/2On8Glu](http://bit.ly/2On8Glu).

- » [Research Spotlight: Science as a Lever for English Learner Equity](#) (April 2017). [bit.ly/2Q8D4gk](http://bit.ly/2Q8D4gk)
- » [Supporting the California Next Generation Science Standards](#) (November 2016). [bit.ly/2R6aZi8](http://bit.ly/2R6aZi8)
- » [A New Formula For Science Success in California Classrooms: California rolls out Next Generation Science Standards curriculum](#)

**GAMUT Online** Includes the following sample policies and administrative regulations for subscribers, available at [www.gamutonline.net](http://www.gamutonline.net).

- » BP/AR 6161.1 – Adoption of Instructional Materials
- » AR 6162.51 – State Academic Achievement Tests

**Communications & Implementation Toolkits from the California Alliance for Next Generation Science Standards (CA4NGSS).** The CA4NGSS facilitates collaboration among education, business, government, and community leaders to support effective and timely implementation of NGSS throughout California. As a member, CSBA is supporting the development of communication toolkits for multiple stakeholders, including a District Leader Toolkit. [cdefoundation.org/cde\\_programs/ca-4-ngss/](http://cdefoundation.org/cde_programs/ca-4-ngss/)

**Teacher to Parent Communication Videos** from the California Science Teachers Association (CSTA). [www.cascience.org/ngss/communications-tools](http://www.cascience.org/ngss/communications-tools)

**Leveraging ESSA to Promote Science and STEM Education in States** from Achieve. [www.achieve.org/science-and-stem-in-essa](http://www.achieve.org/science-and-stem-in-essa)

**Strengthening Science Education and Environmental Literacy Through Local Control:** A Toolkit to Help Develop Your District’s Local Control Accountability Plan (LCAP) from the Lawrence Hall of Science at UC Berkeley. [bit.ly/2ObnKT9](http://bit.ly/2ObnKT9)

## Endnotes

- 1 Norman, H. (2017, October 19). Will California’s STEM Pipeline Run Dry? *San Francisco Business Times*. Retrieved from [www.bizjournals.com/sanfrancisco/news/2017/10/19/stem-pipeline-sf-california-uc-system-degrees.html](http://www.bizjournals.com/sanfrancisco/news/2017/10/19/stem-pipeline-sf-california-uc-system-degrees.html)
- 2 [www.nextgenscience.org/sites/default/files/resource/files/NGSS%20Overview%20for%20Principals\\_0.pdf](http://www.nextgenscience.org/sites/default/files/resource/files/NGSS%20Overview%20for%20Principals_0.pdf)
- 3 California Department of Education. Downloaded August 6, 2018, from [www.cde.ca.gov/ci/sc/cf/scifwprepubversion.asp](http://www.cde.ca.gov/ci/sc/cf/scifwprepubversion.asp)
- 4 California Department of Education. Downloaded August 6, 2018, from [www.cde.ca.gov/pd/ca/sc/ngssfaq.asp](http://www.cde.ca.gov/pd/ca/sc/ngssfaq.asp)
- 5 California Department of Education. Downloaded August 6, 2018, from [www.cde.ca.gov/ci/cr/cf/imfrpfaq1.asp](http://www.cde.ca.gov/ci/cr/cf/imfrpfaq1.asp)
- 6 Adapted from d’Alessio, Matthew A. (2018). Executive Summary: Science Framework for California Public Schools: Kindergarten Through Grade Twelve. Sacramento: Consortium for the Implementation of the Common Core State Standards. Retrieved from [www.scoe.net/castandards/Documents/summary\\_science\\_framework.pdf](http://www.scoe.net/castandards/Documents/summary_science_framework.pdf).
- 7 Tyler B., et al. (2017). *The Synergy of Science and English Language Arts: Means and Mutual Benefits of Integration*. Retrieved from [www.wested.org/wp-content/uploads/2017/10/resource-synergy-of-science-and-english-language-arts.pdf](http://www.wested.org/wp-content/uploads/2017/10/resource-synergy-of-science-and-english-language-arts.pdf).
- 8 The other three most common ELA connections made with science were Writing: Informative/Explanatory Texts, Speaking and Listening: Comprehension and Collaboration and Language: Vocabulary Acquisition and Use. See endnote 7.
- 9 [west.edtrust.org/resource/unlocking-learning-science-lever-english-learner-equity/](http://west.edtrust.org/resource/unlocking-learning-science-lever-english-learner-equity/)
- 10 *Next Generation Science Standards*. Appendix C – College and Career Readiness. Downloaded August 6, 2018, from [www.nextgenscience.org/sites/default/files/resource/files/NGSS%20Appendix%20C%20Final%20072613.pdf](http://www.nextgenscience.org/sites/default/files/resource/files/NGSS%20Appendix%20C%20Final%20072613.pdf)
- 11 A’Hearn, P. (2012, September 1). The NGSS and College and Career Readiness – or – How I Spent My Summer Vacation. *Classroom Science*. Retrieved from: [www.classroomscience.org/](http://www.classroomscience.org/)

- the-ngss-and-college-and-career-readiness-or-how-i-spent-my-summer-vacation
- 12 Shasta County Office of Education. Downloaded August 1, 2018. [www.shastacoe.org/programs-services/north-state-stem-stem/careerday2018](http://www.shastacoe.org/programs-services/north-state-stem-stem/careerday2018)
- 13 California Department of Education. Downloaded August 1, 2018. [www.caaspp.org/rsc/pdfs/CAST-Academy/18\\_Instructional-Shifts-Handout.pdf](http://www.caaspp.org/rsc/pdfs/CAST-Academy/18_Instructional-Shifts-Handout.pdf)
- 14 “Engaging in Argument from Evidence” is one of the *Scientific and Engineering Practices* of the NGSS.
- 15 California Department of Education. Downloaded August 6, 2018, from [www.cde.ca.gov/pd/ca/sc/ngssfaq.asp#e13](http://www.cde.ca.gov/pd/ca/sc/ngssfaq.asp#e13)
- 16 [iusd.org/sites/default/files/ngssboardpresentationfinal11-15-16.pdf](http://iusd.org/sites/default/files/ngssboardpresentationfinal11-15-16.pdf)
- 17 [www.cde.ca.gov/be/pn/im/documents/memo-pptb-amard-aug18item01.docx](http://www.cde.ca.gov/be/pn/im/documents/memo-pptb-amard-aug18item01.docx)
- 18 California Department of Education. Downloaded August 6, 2018, from [www.cde.ca.gov/ta/tg/ca/documents/cast-pgtu.pdf](http://www.cde.ca.gov/ta/tg/ca/documents/cast-pgtu.pdf)
- 19 [www.cde.ca.gov/be/pn/im/documents/memo-pptb-adad-aug18item01.docx](http://www.cde.ca.gov/be/pn/im/documents/memo-pptb-adad-aug18item01.docx)
- 20 CCSSO Science SCASS Committee on Classroom Assessment. (2018). Using Crosscutting Concepts to Prompt Student Responses. Downloaded August 1, 2018. [www.ccsso.org/sites/default/files/2018-06/Using%20Crosscutting%20Concepts%20To%20Prompt%20Student%20Responses%20Science.pdf](http://www.ccsso.org/sites/default/files/2018-06/Using%20Crosscutting%20Concepts%20To%20Prompt%20Student%20Responses%20Science.pdf)
- 21 Next Generation Science Standards. (2017). *Next Generation Science Standards District Implementation Indicators*. [www.nextgenscience.org/sites/default/files/NGSS%20District%20Implementation%20Indicators%20-%20FINAL.pdf](http://www.nextgenscience.org/sites/default/files/NGSS%20District%20Implementation%20Indicators%20-%20FINAL.pdf)
- 22 See endnote 21.
- 23 To facilitate the planning process, the Science Partnership has a District Action Plan and NGSS Planning Tool available that can help districts track their progress in areas such as professional learning and community engagement. Made available by the Alliance for California for NGSS (CA4NGSS). Available at: [cdefoundation.app.box.com/s/6k8p1czyye8pf1x4k79o4gthiqsc7581](http://cdefoundation.app.box.com/s/6k8p1czyye8pf1x4k79o4gthiqsc7581)
- 24 Retrieved from [k12alliance.org/ca-ngss.php](http://k12alliance.org/ca-ngss.php)
- 25 Tyler, B., et. al. *Developing District Plans for NGSS Implementation: Preventing Detours and Finding Express Lanes on the Journey to Implement the New Science Standards*, [k12alliance.org/ca-ngss.php](http://k12alliance.org/ca-ngss.php)
- 26 See endnote 25.
- 27 Darling-Hammond, L. et. al. (2017, June 5). Effective Teacher Professional Development. Retrieved from [learningpolicyinstitute.org/product/effective-teacher-professional-development-brief](http://learningpolicyinstitute.org/product/effective-teacher-professional-development-brief)
- 28 Iveland, A. et al. (2017) *Administrators Matter in NGSS Implementation: How School and District Leaders and Making Science Happen*. Retrieved from [www.wested.org/wp-content/uploads/2017/10/NGSS-Administrators-Matter-Report3.pdf](http://www.wested.org/wp-content/uploads/2017/10/NGSS-Administrators-Matter-Report3.pdf)
- 29 Cal. Educ. Code § 60210. Retrieved from [codes.findlaw.com/ca/education-code/edc-sect-60210.html](http://codes.findlaw.com/ca/education-code/edc-sect-60210.html)
- 30 [nextgentime.org/](http://nextgentime.org/)
- 31 [www.nextgenscience.org/sites/default/files/NGSS%20Alignment%20Claims\\_0.pdf](http://www.nextgenscience.org/sites/default/files/NGSS%20Alignment%20Claims_0.pdf) Sawchuk, S. (2018, June 5) Educators Scramble for Texts to Match Science Standards. *Education Week*. Retrieved from [www.edweek.org/ew/articles/2018/06/06/educators-scramble-for-texts-to-match-science.html](http://www.edweek.org/ew/articles/2018/06/06/educators-scramble-for-texts-to-match-science.html)
- 32 Available to GAMUT Online subscribers. [www.csba.org/ProductsAndServices/AllServices/Gamut.aspx](http://www.csba.org/ProductsAndServices/AllServices/Gamut.aspx)

- 33 A'Hearn P. and Murphy-Shaw, M. (2018, April 26) The Williams Act and You – A Love Story. *Classroom Science*. Retrieved from [www.classroomscience.org/the-williams-act-and-you-a-love-story](http://www.classroomscience.org/the-williams-act-and-you-a-love-story)
- 34 Jones, C. (2018, June 27). State budget has nearly \$400 million for science, math education — but not teacher training. *EdSource*. Retrieved from [edsources.org/2018/state-budget-has-nearly-400-million-for-science-math-education-but-not-teacher-training/599722](http://edsources.org/2018/state-budget-has-nearly-400-million-for-science-math-education-but-not-teacher-training/599722)
- 35 Vandergon, G. et al. (2018, March 8). Will Your District Fund NGSS? It's Up to You! *Classroom Science*. Retrieved from [www.classroomscience.org/will-your-district-fund-ngss-its-up-to-you](http://www.classroomscience.org/will-your-district-fund-ngss-its-up-to-you)
- 36 Next Generation Science Standards. How the New Budget Funds STEM in ESSA. Retrieved from [www.nextgenscience.org/resources/how-new-budget-funds-stem-essa](http://www.nextgenscience.org/resources/how-new-budget-funds-stem-essa)
- 37 Children Now. (2018) *California Children's Report Card: A Review of Kids' Well-Being & Roadmap for the Future*. Retrieved from [www.childrennow.org/files/7715/1613/3234/Children\\_Now\\_2018\\_Report\\_Card.pdf](http://www.childrennow.org/files/7715/1613/3234/Children_Now_2018_Report_Card.pdf)
- 38 Science Partnership. Guide to District Action. Retrieved from [www.acoe.org/cms/lib/CA02209553/Centricity/Domain/43/Guide%20to%20District%20Action%20for%20NGSS.pdf](http://www.acoe.org/cms/lib/CA02209553/Centricity/Domain/43/Guide%20to%20District%20Action%20for%20NGSS.pdf)
- 39 San Diego Unified School District. Downloaded August 6, 2018. [www.classroomscience.org/eccs09012010/wp-content/uploads/2016/05/Support-NGSS-in-LCAP-Speech-for-Community-Meetings.pdf](http://www.classroomscience.org/eccs09012010/wp-content/uploads/2016/05/Support-NGSS-in-LCAP-Speech-for-Community-Meetings.pdf)
- 40 Connecticut State Department of Education. A ToolKit for Local School Boards. Downloaded August 6, 2018. [portal.ct.gov/SDE/Science/Science-Standards-and-Resources](http://portal.ct.gov/SDE/Science/Science-Standards-and-Resources)

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# Governance Brief

## Supporting STEM Access, Equity, and Effectiveness:

*Equitable Access to Rigorous STEAM Coursework*

By Eric Hoyer and Manuel Buenrostro

In a complex and changing world, today's students need to be equipped to meet modern challenges. Learning in science, technology, engineering, art, and math—also known as STEAM—builds the knowledge and skills needed to reason through tough problems and find creative, effective, and reasonable solutions. By its very nature, STEAM supports project-based learning and fosters students' ability to think critically, communicate, and collaborate. Therefore, it is critical for all students to be exposed to a rigorous STEAM curriculum in early grades as well as in middle and high school.

This brief provides an overview of current access to rigorous STEAM coursework for California's K-12 public school students and the benefits of such access. It also offers an overview of some of the barriers to student access, opportunities presented by the implementation of new math and science standards, and questions for board members to consider. With this information, governing boards will be better able to understand access in their districts and county offices of education (COEs) and develop solutions with their superintendent, staff, and community to improve access for all and close opportunity gaps.

### Why STEAM Matters

Nearly one in five jobs in the United States requires at least some education in science, technology, engineering, and math, with the growth of these jobs expected to outpace available jobs in other sectors.<sup>1</sup> Further, according to a 2015 report by the Public Policy Institute of California, the state faces a shortage of 1.1 million college-educated workers by 2030. Demand is expected to increase most rapidly in many high-paying occupations, including computer and mathematical science, architecture, engineering, and health care.<sup>2</sup> The ability to meet this demand with an educated, prepared workforce—particularly in science and

**In this brief you will find:**

- » **How STEAM learning affects California's economic outlook.**
- » **How integration of the arts can enrich STEM learning.**
- » **The portion of California public high schools offering STEAM courses.**
- » **Student groups that lack access to STEAM courses.**
- » **Issues that can prevent all students from achieving access to rigorous STEM courses.**
- » **Promising practices to expand access to STEAM courses and experiences.**

engineering—is crucial to California's future economic prosperity. The benefits of strong STEAM instruction are not limited to students who choose a career in science or technology—the concepts of innovation and critical thinking are essential to any professional in the arts, business, or social sciences.

In addition, taking more advanced math and science courses during high school is associated with higher earnings and improved chances of employment in science, technology, engineering, and math fields.<sup>3</sup> Evidence points to especially large returns for calculus.<sup>4</sup> There is also substantial evidence that providing students with a well-rounded curriculum improves their likelihood of success in college and careers.

For example, a 2017 report by Education Trust–West highlighted the benefits of science and engineering courses in promoting both content and language learning for English learners,<sup>5</sup> with a more recent report highlighting similar benefits from math courses.<sup>6</sup>

### Why the “A” in “STEAM”?

Teaching students in a way that fosters their creativity and ability to develop new and innovative solutions is critical to their success. When building creativity through teaching the arts, schools are not only providing a more well-rounded education but also elevating student capacity in other subject areas. For example, in a study of Learning Through the Arts, a program that provides a curriculum that integrates arts with academic subjects in elementary school, participants scored higher on math computation tests by the third year in the program than non-participants.<sup>7</sup> An additional study found that students in elementary schools that offered instruction in art, music, and physical education taught by specialists performed better in academic subjects than students in schools without these opportunities.<sup>8</sup> There is strong public support for arts in education, as 79 percent of Americans agree that incorporating the arts into education is “the first step in adding back what’s missing in public education today,” according to a 2005 Harris poll.<sup>9</sup>

## Access to Rigorous STEAM Education in California

Access to rigorous coursework is defined by two factors: 1) course availability in schools and 2) the ability of students to enroll and succeed in offered courses.

### Course Availability in Schools

California schools experience troubling gaps in the availability of advanced math and science classes. According to the U.S. Department of Education’s Civil Rights Data Collection, California is below the national average in the percentage of schools offering an array of mathematics and science courses.<sup>10</sup> Only 78 percent of California public schools with any grade from seven to 12 offered classes in Algebra I, a course that includes content that builds capacity for more advanced math coursework.

Although 2,666 California public schools serve students in at least one grade from nine through 12, the University of California reports:

- » **1,800 (67 percent) public schools offer at least one laboratory science** course meeting A-G requirements in grades nine through 12.
- » **1,901 (71 percent) public schools offer at least one mathematics** course meeting A-G requirements in grades nine through 12; and
- » **1,737 (65 percent) public schools offer at least one visual and performing arts** course meeting A-G requirements in grades nine through 12.<sup>11</sup>

The good news is that high school graduates are increasingly completing A-G requirements, albeit at a modest rate. From 2000–18, completion rates rose from 35 percent to 46 percent.<sup>12</sup> Latino students stand out as making the largest gains (51 percent) in A-G completion over a 14-year period (2000–14). Nevertheless, there are significant gaps in A-G completion across schools. According to the Public Policy Institute of California, there is a 14 percentage-point A-G achievement gap between low-minority and high-minority schools (34 percent completion vs. 20 percent completion).<sup>13,14</sup> Moreover, the data indicate California’s students of color and economically disadvantaged students are less likely to attend schools that offer these rigorous courses.

## Access to Offered Courses

Even when students of color and economically disadvantaged students attend schools offering these classes, they are less likely to enroll in them. This outcome is likely due to a variety of factors, including a lack of previous preparation, limited or nonexistent advising, or lack of learning supports (such as tutoring or extended learning) that can help students succeed in challenging courses.<sup>15</sup>

### Policy

School and district policies can also impede students from taking more rigorous courses despite good grades and test scores. One way this is seen is in math misplacement; that is, when students are not placed in classes for which they are qualified and for which they have adequately met prerequisites. Evidence shows that math misplacement disproportionately affects students of color.<sup>16</sup> In a joint CSBA and Silicon Valley Community Foundation brief on the subject, the cause of math misplacement was determined to

result primarily from the “overreliance on subjective factors to make placement decisions.”<sup>17</sup> To address this issue, parents and students need clear criteria on how a district places students in math courses as well as information on the process to appeal an inappropriate placement. To avoid math misplacement, schools can also audit students’ course placement within the first month of school to ensure that misplacement has not occurred.<sup>18</sup>

Math misplacement creates a leak in the STEAM pipeline for students, whether their post-secondary plan is to attend community college, university, or go directly into the workforce. For students attending college, whether two- or four-year, if they have been misplaced in high school they may spend unneeded time in college satisfying basic skills courses which are non-degree applicable.<sup>19</sup> A 2017 executive order by the chancellor of the California State University system changed how students make up for entrance requirements. Remedial courses will be eliminated in favor of “stretch” courses, and summer “early start” programs will be offered starting in 2019.<sup>20</sup> This move toward greater access is a positive development, but math misplacement may still hinder student success. If students are insufficiently challenged in middle and high school, they will likely be unprepared for the rigors of post-secondary coursework.

### *Staff Capacity*

Staff capacity can be a significant factor in a school’s ability to offer rigorous and quality courses. According to the U.S. Department of Education (DOE), 34 percent of public high schools with high-minority student populations had one or more vacancies in difficult-to-staff teaching positions, nearly double that of low-minority public high schools.<sup>21</sup> Of public high schools that had at least one difficult-to-staff teaching position, the most common subjects were mathematics (9.1 percent) and physical sciences (8.4 percent).<sup>22</sup>

In California, the number of teachers who have math and science credentials has been declining.<sup>23</sup> Nationally, teachers of STEM subjects are the second most likely to leave the profession. According to the DOE, “both beginning and veteran teachers are more likely to quit when they work in districts with lower wages and when their salaries are low relative to alternative wage opportunities, especially in high-demand fields like mathematics and science.”<sup>24</sup> When the DOE examined what would make “leavers” come back to teaching, of equal weight were the ability to maintain teaching retirement benefits and a salary increase.<sup>25</sup>

While the teacher shortage in California is a common refrain, the shortage of minority teachers is particularly acute. Research shows that teacher diversity matters when

it comes to student learning. When female students have female instructors in math and science, they demonstrate increased participation, higher grades, and are more likely to continue coursework in STEM. Race matters in teacher–student relations as well.<sup>26</sup> Researchers hypothesize that same-race teachers may be able to make material more culturally relevant to students and provide role models for them. Perception is also an issue. For example, among students with similar test scores, white teachers tend to assign white students to gifted programs at higher rates than black students.<sup>27</sup>

To integrate STEM and the arts, schools need arts capacity as well, yet California teachers receive little or no arts training in elementary teacher education programs. Teachers earning their credentials between 1970 and 2004 may not have had any arts training at all. Since 2004, teacher candidates have had basic training in arts education, but not to the same extent as before 1970. This minimal arts training can limit a teacher’s toolbox in making math and science creative and engaging for students.

## **Underrepresentation in Advanced STEM and AP Courses**

According to 2015–16 data from the Civil Rights Data Collection, California’s African American, Latino, and American Indian/Alaska Native students are underrepresented in advanced STEM and AP courses (see Table 1).<sup>28</sup>

Looking at enrollment in a few benchmark STEM courses reveals how many of California’s public school students are taking advanced courses in math and science.<sup>29</sup> While Hispanic and African American students are enrolled in biology at or above the state average, their enrollment is not as robust in chemistry and Algebra II. American Indian students are underrepresented in all three courses (see Table 2).

### *Computer Science*

While nationally there is increased attention to expanding computer science access, the most recent data show California has a long way to go to increase access and competency. Only 49 percent of K-12 schools offer computer programming courses and only 39 percent of those courses meet UC/CSU A-G requirements.<sup>30</sup> Sixty-five percent of public high schools offer no computer classes, even basic computer literacy courses.<sup>31</sup> To expand computer science offerings, staffing will have to be markedly increased. There is a persistent computer science teacher shortage, with the number of instructors remaining flat at about 3,000 from 2000–16.<sup>32</sup>

**Table 1: 2015-16 Enrollment in Calculus, Physics, AP Math, and AP Science, by Ethnicity**

Ethnicity	% of CA Student population	Calculus	Physics	AP Math	AP Science
Latino	54.0%	33.2%	44.7%	29.3%	30.5%
White	24.1%	28.3%	26.3%	30.0%	30.3%
Asian or Filipino	11.4%	29.8%	18.7%	32.3%	30.8%
African-American	5.8%	3.3%	5.2%	3.2%	3.3%
Two or more races	3.1%	4.1%	3.6%	3.8%	3.8%
American Indian or Alaska Native	0.6%	0.5%	0.6%	0.5%	0.5%
Native Hawaiian or Pacific Islander	0.5%	1.0%	0.8%	0.8%	0.9%

**Table 2: 2015-16 Enrollment in Algebra II, Chemistry, and Biology by Ethnicity**

Ethnicity	% of CA Student Population	Algebra II	Chemistry	Biology
Latino	54.0%	49.9%	48.5%	52.9%
White	24.1%	26.0%	25.4%	24.3%
Asian or Filipino	11.4%	13.3%	15.7%	12.1%
African-American	5.8%	6.0%	5.7%	6.1%
Two or more races	3.1%	3.3%	3.4%	3.2%
American Indian or Alaska Native	0.6%	0.7%	0.6%	0.6%
Native Hawaiian or Pacific Islander	0.5%	0.8%	0.8%	0.7%

One benchmark for computer science access and equity is participation in the Advanced Placement (AP) Computer Science A and the AP Computer Science Principles tests (see Table 3). Asian students represent 53.6 percent of students taking the AP exam, while they make up less than 11

percent of the student population. Latino students are over 53 percent of the student population, but less than 13 percent of exam takers. Only 1.7 percent of African American students take the AP Computer Science exam, while they compose 6.2 percent of the public school population.

**Table 3: 2017 AP Computer Science Test Participation<sup>33</sup>**

Ethnicity	Computer Science A	Computer Science Principles
Asian	5,031 (49%)	2,917 (34.1%)
White	2,795 (27.2%)	2,126 (24.8%)
Latino	1,469 (14.3%)	2,677 (31.3%)
Two or More Races	571 (5.6%)	418 (4.9%)
African American	138 (1.3%)	207 (2.4%)
Native Hawaiian or Pacific Islander	25 (0.2%)	23 (0.3%)

## Standards Implementation: An Opportunity

### Mathematics

The California Mathematics Framework, adopted by the State Board of Education (SBE) in 2013, offers students two high school pathways that, assuming no interruptions, place students in Precalculus by 12th grade.<sup>34</sup> While the traditional pathway of Algebra I > Geometry > Algebra II > Precalculus can still be followed, an integrated pathway is also an option. A Math I to III course sequence substitutes for the first three courses listed previously. The CDE also has options for summer bridge courses and double-up options that bring students to Precalculus by grade 12. When looking at an accelerated pathway, there are more options, including taking Algebra in eighth grade or creating hybrid Math I/II and Math II/III courses to prepare students to take Calculus by 12th grade.

An opportunity to capitalize on the growth of STEM careers while satisfying the A-G requirements is to offer Statistics in lieu of Calculus or Precalculus. One career path that makes heavy use of statistics is data science. According to salary tracking website Glassdoor, “data scientist” has been the top job in the U.S. from 2015–18, with a median base salary of \$110,000 and more than 4,524 job openings in 2018. While this career path often requires an advanced degree, a data analyst position does not, and has a median base salary of \$60,000, with more than 4,700 openings in 2018.<sup>35</sup>

### Science

The Next Generation Science Standards (NGSS) were adopted by California in 2013. While districts are still learning how to best implement them, the standards offer opportunities to rethink how to increase access to science courses. Science course sequencing is an area where schools can innovate. As with math placement, boards should encourage transparency about science placement and sequencing, and consider how this will impact students’ college readiness and competitiveness.

New science standards also require professional learning for teachers, presenting an opportunity to invest in resources that emphasize creativity and an equity mindset. Although instructional materials are an important part of the equation, professional learning helps teachers shift their mindsets, creating the opportunity to broaden the scope of science learning to incorporate the arts, integrate with math and English language arts learning, and develop strategies to reduce achievement gaps.

While STEAM integration can happen throughout grades K-12, it most naturally happens in K-5, given the elementary school model of a self-contained classroom with one teacher who can easily incorporate subjects from across the curriculum into the lesson. This arrangement also poses challenges, as primary teachers need to be able to pivot across subjects, and—as the newer standards emphasize—to be able to work with colleagues to integrate learning across subjects and grade levels.

### Computer Science

In September 2018, the SBE approved the first-ever computer science standards for California. This move is part of a national trend to fill the massive job gap in computer programming and engineering. As mentioned previously, data science is an in-demand field, but its needs pale in comparison with the need for software engineers, which topped 29,000 in 2018. The SBE has released guidelines for computer science standards that address both the employment demand and the connection of computer science to STEAM.<sup>36</sup> The draft standards use creativity as one of the core elements of computer science education and emphasize that the final standards should look “past the role of users of computing technology toward active creators and innovators, engaged with computer science as an artistic and collaborative endeavor.”<sup>37</sup> Creativity and collaboration are part of computer science, reinforcing the active, creative learner that NGSS promote.<sup>38</sup>

### Promising Practices

**Science and Art.** NGSS promote creativity by asking students to develop their own solutions to problems. Education Closet has created videos on how to integrate dance into lessons about energy as one way to bridge science and art.<sup>39</sup> The lessons do not require an arts education background and are simple ways to diversify lessons and bring out students’ creativity. Another strong trend in science education is the use of makerspaces, where children learn science in the context of building something through 3D printing, computer simulation, or construction. Makerspaces can be leveraged through community and corporate partnerships. For example, San Joaquin County Office of Education works with urban and rural schools to bring students to a fabrication lab in Stockton that uses laser cutters, 3D printers, and computer numerical control machines.<sup>40</sup>

**Math and Art.** The Armory Center in Pasadena and Pasadena Unified School District have developed a free program called “Artful Connections with Math” that includes lesson plans for second- and third-grade teachers. These lessons involve engaging students on topics such as how to



depict numbers, how to understand fractions, and the connections between math and art in bar graphs. Experiences like these create additional opportunities for collaboration between math and art departments within a school. As researcher Michelle Land suggests, art educators can use their skills and art theory about colors and shapes to inform math lessons on data visualization. Bending circuits, analyzing musical compositions, and developing engineering prototypes are also areas for math and art faculty collaboration.<sup>41</sup>

**Summer Learning.** Summer can be an opportunity to promote STEAM and reduce summer learning loss. A study of ninth-graders found that two-thirds of the achievement gap between economically disadvantaged students and their more affluent counterparts “could be explained by what happened over the summer during the elementary school years.”<sup>42</sup> Schools can use the summer to develop creative STEAM experiences and help students get ahead in STEAM courses. CSBA has developed resources for STEAM summer learning, including a district planning guide and a “Guide for Regional Partners in California” to identify with what organizations districts and county offices of education can collaborate on STEAM learning.<sup>43</sup>

## Conclusion

In this brief, we have highlighted the importance of STEAM for the future of California and its students, and the importance of ensuring access to these courses as basic requirements for college and career success. Providing a quality STEAM education and ensuring access to these rigorous courses requires important decisions about resources and policy. In addition to materials and supplies, STEAM access involves recruiting and retaining teachers as well as providing professional learning—for example, to help existing teachers gain the skills to teach statistics or calculus in schools that do not currently offer these subjects. It also requires school policies on math and science placement, course sequencing designed to ensure students are not inappropriately or inadvertently left out of the pipeline, and it takes investments to ensure all students have the support they need to succeed in rigorous courses. Efforts can be enhanced by partnering with community organizations that can help support real-life STEAM experiences and learning, and that can contribute resources of time, experience, and materials. Participating in decisions about resources and policy, as well as fostering the community relationships necessary to build useful partnerships, are part of what school boards do for their districts and counties.

## Questions for Board Members to Consider

1. What are the district’s or COE’s STEM and arts staffing needs?
2. What does district or COE data tell us about course-completion patterns among different student groups?
3. What are the district’s or COE’s policies on math placement in middle and high school that may be hindering student success?
4. What might we do to promote integrated teacher professional learning for math, science, and the arts to better engage students?
5. What are the district or COE summer needs and can STEAM be used to reduce summer learning loss?
6. What might the district or COE do to promote STEAM in its science fair, art shows, and districtwide learning events?

## Endnotes

- 1 Rothwell, J. (2013). The hidden STEM economy. *Metropolitan Policy Program at Brookings*. Retrieved from <https://brook.gs/2P3hQ7C>
- 2 Johnson, H., Cuellar Mejia, M., Bohn, S. (2015). Will California run out of college graduates? *Public Policy Institute of California*. Retrieved from <https://bit.ly/2eAwzB4>
- 3 Black, S. E., He, Z., Muller, C., & Spitz-Oener, A. (2015). *On the origins of STEM: The role of high school STEM coursework in occupational determination and labor market success in mid-life*. Retrieved from <https://bit.ly/2qny8tm>
- 4 Rose, H., & Betts, J. R. (2004). The effect of high school courses on earnings. *The Review of Economics and Statistics*, 86(2), 497-513. Retrieved from <https://bit.ly/2AEMs6O>
- 5 Feldman, S., & Malagon, V. F. (2017). *Unlocking learning: Science as a lever for English learner equity*. Oakland, CA: The Education Trust-West. Retrieved from <https://bit.ly/2OYAHrn>
- 6 The Education Trust-West. (2018). *Unlocking Learning II: Math as a Lever for English Learner Equity*. Retrieved from <https://bit.ly/2OgRJ83>
- 7 Smithrim, K., & Upitis, R. (2005). Learning through the arts: Lessons of engagement. *Canadian Journal of Education*, 28(1-2) 109-127. Retrieved from <https://bit.ly/2zIKer8>
- 8 Wilkins, J., Graham, G., Parker, S., Westfall, S., Fraser, R., & Tembo, M. (2003). Time in the arts and physical education and school achievement. *Journal of Curriculum Studies*, 35(6), 721-734. Retrieved from <https://bit.ly/2Rr8mjd>

- 9 National Assembly of State Arts Agencies. *Critical Evidence: How The Arts Benefit Student Achievement* <https://bit.ly/2zicz1o>
- 10 CSBA Analysis: US Department of Education Office of Civil Rights. Accessed September 1, 2018 from <https://bit.ly/2SAH7nZ>
- 11 *California State University A-G Course List*. Retrieved from <https://bit.ly/2CRvAes>
- 12 CSBA Analysis: *CDE Dataquest*. Accessed September 11, 2018 from <https://bit.ly/2PiGRrD>
- 13 Public Policy Institute of California. (2016). *College Readiness in California: A Look at Rigorous High School Course-Taking*. Retrieved from <https://bit.ly/2DHqa3n>
- 14 U.S. Department of Education. Accessed October 19, 2018 from <https://bit.ly/2zhf5oG>
- 15 U.S. Department of Education. (2016). *2013-2014 civil rights data collection: A first look*. Retrieved from <https://bit.ly/1UcjKgT>
- 16 Finkelstein, N., Fong, A., Tiffany-Morales, J., Shields, P., & Huang, M. (2012). *College bound in middle school & high school? How math course sequences matter*. Sacramento, CA: Center for the Future of Teaching and Learning at WestEd. Retrieved from <https://bit.ly/2PwjspR>
- 17 California School Boards Association. (2015). *Math Misplacement*. Retrieved from <https://bit.ly/2QaGKPk>
- 18 See endnote 17.
- 19 Legislative Analyst's Office. (2016). *Overview of Community College Basic Skills Programs*. Retrieved from <https://bit.ly/2RsDorc>
- 20 Xia, R. (2017). Cal State Will No Longer Require Placement Exams and Remedial Classes for Freshman. *Los Angeles Times*. Retrieved from <https://lat.ms/2vuioZc>
- 21 National Center for Education Statistics. Accessed September 20, 2018 from <https://bit.ly/1lINw7q>
- 22 See endnote 21.
- 23 Sutchter, L., Darling-Hammond, L., and Carver-Thomas, D. (2016). *A Coming Crisis in Teaching? Teacher Supply, Demand, and Shortages in the US*. Learning Policy Institute. Retrieved from <https://bit.ly/2JrBvbj>
- 24 See endnote 23.
- 25 See endnote 23.
- 26 Hollinside, M. (2017). *African-American Students in Focus: Supporting African-American Teacher Retention*. CSBA Governance Brief. Retrieved from <https://bit.ly/2RtsbXs>
- 27 Miller, C. (2018). Does Teacher Diversity Matter in Teacher Learning? *New York Times*. Retrieved from <https://nyti.ms/2qjimpvO>
- 28 CSBA Analysis: *Civil Rights Data Collection for the 2015-16 School Year*. Accessed November 1, 2018 from <https://bit.ly/2zeqTYG>
- 29 See endnote 28.
- 30 Gao, N. (2016). *Computer Science in California K-12 Schools*. Public Policy Institute of California. Retrieved from <https://bit.ly/2nwjBtn>
- 31 Chorneau, T. (2018). Big Swing to Promote Computer Science Study. *K-12 Daily*. Retrieved from <https://bit.ly/2PA7llm>
- 32 Gao, N., Lee, C. (2018). *Prioritizing Computer Science in California Schools*. Public Policy Institute of California. Retrieved from <https://bit.ly/2ADLp76>
- 33 College Board. *AP Data*. Accessed October 31, 2018 from <https://bit.ly/2Q7Qvxy>
- 34 California Department of Education. (2015). Appendix D: Course Placement and Sequences. Retrieved from <https://bit.ly/2DiM7sS>
- 35 Columbus, L. (2018). Data Scientist Is the Best Job In America According Glassdoor's 2018 Rankings. *Forbes*. Retrieved from <https://bit.ly/2Rp6A2f>
- 36 California Department of Education. (2018). *Computer Science Standards Guidelines*. Retrieved from <https://bit.ly/2AEicBT>
- 37 California Department of Education. (2018). *Computer Science Education*. Retrieved from <https://bit.ly/2cGC57V>
- 38 See endnote 36.
- 39 Education Closet. (2018). *Energy and Dance Ideas*. Retrieved from <https://bit.ly/2ERsMAS>
- 40 San Joaquin County Office of Education. (2018). *STEM Opportunities and Events*. Retrieved from <https://bit.ly/2RrMNPv>
- 41 Land, MH. (2013). Full STEAM Ahead: The Benefits of Integrating the Arts into STEM. *Procedia Computer Science*. Retrieved from <https://bit.ly/29J8e9B>
- 42 Alexander, K., Entwistle, D., Olson, L. (2007) Lasting Consequences of the Summer Learning Gap. *American Sociological Review*, (72), 167-180. Retrieved from <https://bit.ly/2DeSMUN>
- 43 California School Boards Association. (2017). *Putting Steam into Your District's Summer: A Guide to Regional Partners and Resources in California*. Retrieved from <https://bit.ly/2yJhmJD>

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# Governance Brief

## Preventing Catastrophic Heat Illness

A joint publication of CSBA and the California Interscholastic Federation (CIF)

### Introduction

According to the Centers for Disease Control, heat illness during sports practice or competition is the leading cause of death or disability among U.S. high school athletes.<sup>1</sup> Today, over 90 percent of California high schools begin their fall semester in August, and athletic practices occur throughout the summer and fall—seasons that have produced extremely hot temperatures in California recently.

While heat illness is preventable, there are still tragic occurrences each year of “near-misses” that include emergency room visits and hospitalizations. With nearly 800,000 student athletes competing in school-based athletic programs in California, it is imperative that schools, districts, and county offices of education invest in education and training for administrators, coaches, teachers, parents, and students in order to keep students safe.

### What is Heat Illness?

Exercise produces heat within the body and can increase an athlete’s body temperature. While the body normally cools itself by sweating, under some conditions, sweating just isn’t enough. Several factors affect the body’s ability to cool itself during extremely hot weather. For example, when humidity is high, sweat will not evaporate as quickly, preventing the body from releasing heat. Add to this other barriers to heat loss such as padding and equipment, and the temperature of the individual can rise rapidly and become dangerously high.

There are progressive steps in heat illness, leading to heat stroke:

- » **Heat stress:** Occurs when a strain is placed on the body as a result of hot weather.

### In this brief you will find:

- » **Information about what heat illness is and the potential danger it poses to students athletes.**
- » **Preventative steps that schools, districts, and county offices of education can take to prevent heat illness.**
- » **Questions for boards to consider in order to keep students safe from heat illness.**

- » **Heat cramps:** Painful muscle spasms in the abdomen, arms, and/or legs following strenuous activity.
- » **Heat syncope:** Sudden dizziness or fainting experienced after exercising in the heat.
- » **Heat exhaustion:** A warning that the body is getting too hot. The person may be thirsty, giddy, weak, uncoordinated, nauseated, and may sweat profusely. The body temperature is usually normal, the pulse is normal or raised, and the skin is cold and clammy.
- » **Heat stroke:** Occurs when the body becomes unable to control its temperature and it rises above 104°F. The body’s temperature elevates rapidly, the sweating mechanism fails, and the body is unable to cool down. Within 10–15 minutes, body temperature may rise to 106°F or higher. Other symptoms may include confusion; combativeness; bizarre behavior; faintness;

staggering; strong, rapid pulse; dry, flushed skin; lack of sweating; possible delirium; or coma. Heat stroke is a serious medical condition that can cause death or permanent disability, so immediate medical attention is essential when symptoms are first detected.

## Preventative Steps

Minimizing risk and reducing injuries of California's student athletes is a critical issue for board members, the CIF, and the 70,000 high school coaches in California. In 1996, the CIF founded a Sports Medicine Advisory Committee (CIF SMAC) of 20 of the most preeminent sports medicine physicians, certified athletic trainers, and health care providers in the state to enhance and promote policy decisions designed to minimize risks and reduce injuries, including the risk of heat illness.

Based on the recommendations of the CIF SMAC, the CIF has continued to adapt its safety protocols to reflect the most recent advances in sports medical science. Reducing risks and minimizing injuries of California's student-athletes has been and remains CIF's top priority. Boards can help prevent heat illness by ensuring that school staff, including coaches, have access to training on heat illness, and that emergency action plans are updated and include before-and after-school activities.

### Heat Illness Prevention Training

School districts and county offices of education can work with partners, such as the CIF, to ensure that all coaches and other school staff have access to training on heat illness. Fortunately, offering such training is primarily about information and coordination, and does not have to place an undue burden on available resources.

Through the National Federation of State High Schools (NFHS), the CIF offers a free online course for coaches and other school staff designed to give the information needed to minimize the risk of heat stroke among athletes. The course presents seven fundamentals, which, when followed, will minimize heat-related illnesses of students.

1. Start Slow, Then Progress
2. Allow for Individual Conditioning
3. Adjust Intensity and Rest
4. Start Sessions Adequately Hydrated
5. Recognize Signs Early
6. Recognize More Serious Signs
7. Have an Emergency Action Plan

Upon successfully passing the class, the coaches are issued a certificate and added to a statewide database that eases school, district, and county office of education verification of completion. This free online class (along with others such as the CIF NFHS Concussion program) can be found on the NFHS website at <https://bit.ly/2FfhZeD>.

**Assembly Bill 2800, California High School Coaching Education and Training Program: Heat Illness (Chu)** *requires high school coaches to be trained with a basic understanding of heat illness, and authorizes such training to be fulfilled through entities offering free, online, or other types of training courses. The free CIF NFHS class can fulfill this new requirement. The bill was signed into law by the Governor on June 1, 2018, and the requirements will take effect on January 1, 2019.*

### Emergency Action Plans

Education Code requires schools to update and forward a comprehensive safety plan to their district or county office of education for approval each year by March 1. The comprehensive safety plans must include procedures for dealing with emergencies, which are often referred to as Emergency Action Plans (EAP). Having districts and county offices of education verify that EAPs remain in place during before-and after-school activities can help to ensure student safety.

According to the CIF, 68 percent of California's 1.9 million 9th- through 12th-grade students participate in after-school activities on school campuses. Of the coaches who work with student athletes, almost three quarters—72 percent—are "walk-ons," meaning they are not members of the school faculty. It is essential that schools ensure that these coaches, as well as those who are on the faculty, are aware of the EAP and know what to do when the campus may be empty and they are facing a situation where seconds can make the difference between life and death, such as when heat illness occurs.

To assist schools in bridging the planning gap, in 2015 the CIF mailed a nationally recognized EAP guide for athletics and other activities to all high schools, which should be a critical component of a school's comprehensive safety plan. This guide helps schools establish their after-school emergency procedures regardless of the venue: the gymnasium, theater, football stadium, or the softball field. More information about EAPs, including the guide, can be found on the CIF website at <https://bit.ly/2HOMc9G>.

## Questions for Boards to Consider

1. Who in the district is ensuring that all coaches have met the minimum Education Code requirements?
2. Does each of our schools have an Emergency Action Plan that includes before- and after-school events?
3. How do our athletic directors make sure that all coaches, including walk-ons, know and understand the district expectations, including those under the Emergency Action Plan?
4. Do our schools have a Certified Athletic Trainer available at practice and competitions? If not, who is responsible for dealing with student injuries, emergencies, and treatment (both on and off campus)?
5. Do our schools have quick and easy access to ice tubs that can help in case of a heat illness emergency (these tubs can be as simple and inexpensive as a kiddie swimming pool with ice)?
6. Do our schools have adequate safe water available at all practice locations?

## Additional Resources

- » CSBA Policies, available to GAMUT subscribers at [gamutonline.net](http://gamutonline.net)
  - › BP/AR 0450 — Comprehensive Safety Plan
  - › AR 3514 — Environmental Safety
  - › BP/AR 3516 — Emergencies and Disaster Preparedness Plan
  - › AR 3517 — Facilities Inspection
  - › BP/AR 4127, 4227, 4327 — Temporary Athletic Team Coaches
  - › BP 5141.3 — Health Examinations
  - › BP 5141.7 — Sun Safety
  - › BP/AR 6145.2 — Athletic Competition
- » CSBA Fact Sheet, “Drinking Water Access in Schools”: <https://bit.ly/2smHypy>
- » NFHS Heat Illness Prevention Free Online Class: <https://bit.ly/2FfhZeD>

- » CIF Heat Illness Prevention Information and Material: <https://bit.ly/2hgY7ki>
  - › Prevention of Heat Illness: <https://bit.ly/2HuAQnM>
  - › CIF Position Statement & Recommendations: <https://bit.ly/2IORVa7>
  - › NFHS Position on Heat Illness: <https://bit.ly/2Fgk3Db>
  - › ID and Treatment of Heat Illness: <https://bit.ly/2vLrpPz>
  - › Facts About Heat Stress and Athletic Participation: <https://bit.ly/2vN6fjN>
  - › 108°: Critical Response. Addresses the dangers of heat illness in high school sports through personal testimonies from families who have been affected and interviews with coaches, certified athletic trainers, kinesiologists, and other medical professionals: <https://bit.ly/2HOWzKG>
- » Centers for Disease Control and Prevention (CDC) Information on Heat-Related Illness: <https://bit.ly/2Fg3rLC>
- » TEDEd Video, “What Happens When You Get Heat Stroke?”: <https://bit.ly/2L5B06t>



1 Centers for Disease Control and Prevention. (2010). Heat illness among high school athletes—United States, 2005-2009. *Morbidity and Mortality Weekly Report*, 59(32). Retrieved from <https://bit.ly/2ITwPOV>

# Governance Brief

## Title IX Requirements

A joint publication of CSBA and the California Interscholastic Federation (CIF)

### Introduction

Title IX, the landmark legislation signed by President Richard Nixon on June 23, 1972, celebrated its 46th anniversary this year. Public Law 92-318 of the Education Act of 1972, commonly known as Title IX, is a federal law that was enacted to help prevent gender discrimination in the United States educational system. It is intended to guarantee each gender equal rights to educational programs, activities, athletics, facilities, and federal financial assistance. Title IX states that: “No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal financial assistance.”<sup>1</sup> Simply put, it requires school leaders to treat male and female students equally.

With regard to athletics, large gender gaps in participation and support indicated the need for Title IX. In 1968, only 60 percent of California schools had female sports teams and there was a stark difference in numbers of participants: only 35,000 female students participated on high school athletic teams as compared to over 300,000 male students.<sup>2</sup>

Today, over 330,000 female student athletes play on California high school athletic teams. They represent 43 percent of the total number of students who participate in athletics.<sup>3</sup> Significant gains have been made, but it is vital that school leaders continue to promote the fair treatment of student athletes, regardless of gender.

### Equal Resources and Opportunities

At the interscholastic level, Title IX is straightforward. The law requires that school districts provide equitable opportunities for both boys and girls to participate in sports. It

#### In this brief you will find:

- » **Information about the Title IX requirements of equal opportunities and resources for male and female students.**
- » **A summary of school, district, and county office of education posting requirements.**
- » **Information about CIF data collection efforts, which can assist in meeting posting requirements.**
- » **Questions for boards to consider.**

is a school district’s responsibility to ensure the equal treatment of female and male student athletes, regardless of the funding sources, including outside sources from fundraising and booster clubs.

As leaders in their districts, it is important for boards to consider the question: “Do male and female athletes and teams in our schools receive equal benefits?” In exploring this question, boards and other district leaders must remember that it does not matter who funds these benefits.

When it comes to athletics, boards should consider equivalency in the following areas, among others:

- » Athletic equipment, clothing, and other supplies.
- » Locker rooms, storage facilities, and practice and competition facilities.
- » Game and practice times and scheduling (i.e. scheduling competitions during “prime time”).
- » Travel benefits (overnight trips) and transportation, including the types of buses used (school bus vs. luxury bus).
- » Compensation, recruitment, and assignment of coaches.
- » Coverage and publicity such as in yearbooks, school newspapers, announcements, posters, programs, and other communication outlets under a school’s jurisdiction.
- » Facilities for and access to athletic training and medical services.
- » Institutional support services for athletic programs, including support by pep squads and bands, secretarial support, custodial support, etc.
- » Athletic team opportunities (number of teams offered for both boys and girls).

## Posting Requirements

In 2014, California passed Senate Bill 1349 (Education Code 221.9), which required that all schools (following the 2015–16 school year, and thereafter on an annual basis) post on the school website (or district website if the school does not maintain one) data on students’ participation in competitive sports by gender. Two years later, Senate Bill 1375 (Education Code 221.61) was passed requiring that the name and contact information of the Title IX coordinator be posted in a prominent and clearly visible location on the school, district, and county office of education websites, along with information about how to file a complaint under Title IX.

Recently, the Fair Play for Girls in Sports Project (a project of Legal Aid at Work) analyzed schools’ compliance with these reporting requirements. Those conducting the analysis found that out of 108 randomly selected California high schools, fewer than half—just 51 of the 108—had posted any data at all. The study also found that the lack of compliance with the Education Code did not appear to correlate with the racial or socioeconomic composition of a school’s community.<sup>4</sup>

## Summary of Posting Requirements

Senate Bill 1349 (Education Code 221.9) requires schools to report and post each year:

- » The total enrollment of the school, by gender;
- » The total number of male and female students participating in competitive athletics; and
- » The number of boys’ and girls’ teams, classified by sport and by competition level (Freshman, Junior Varsity, and Varsity).

Senate Bill 1375 (Education Code 221.61) requires schools, districts, and county offices of education to post in a prominent and clearly visible location on their websites all of the following:

- » The name and contact information of the Title IX coordinator including a phone number and email address. The importance of this factor is highlighted in a recent survey conducted by the United States General Accountability Office in which roughly 40 percent of athletic administrators at 784 public high schools reported that they were unaware of a Title IX coordinator at their school.<sup>5</sup>
- » The rights of a student and the public, and the responsibilities of the schools, districts, and county offices of education under Title IX, which shall include but not be limited to:
  - » Internet links to information about those rights and responsibilities located on the websites of the California Department of Education’s Office of Equal Opportunity and the United States Department of Education’s Office of Civil Rights, and the list of rights specified in Education Code 221.8.
- » A description of how to file a complaint under Title IX, which shall include:
  - » An explanation of the statute of limitations within which a complaint must be filed after an alleged incident of discrimination has occurred, and how a complaint may be filed beyond the statute of limitations;
  - » An explanation of how the complaint will be investigated and how the complainant may further pursue the complaint (including links to this information on the United States Department of Education’s Office for Civil Rights website); and



- › An internet link to the United States Department of Education’s Office for Civil Rights complaints form and the contact information for the office, which shall include its phone number and email address.

## CIF Participation Census Data Collection

Each year the California Interscholastic Federation (CIF) requests athletic and activity participation data from nearly 1,600 California high schools. The CIF online reporting system allows schools to compile and submit their data to the CIF. Upon conclusion of the census, the CIF posts submitted data on its website, which allows schools and districts to pull their data and post it on their own sites accordingly. This information (which is more detailed than that required to be collected by Education Code 221.9) helps promote transparency of school and district extracurricular programs to the public. More information about the CIF participation census data collection can be found at [bit.ly/2s8j17w](http://bit.ly/2s8j17w).

## Questions for Boards to Consider

Governance teams can play a vital role in ensuring that their schools and districts fulfill their Title IX responsibilities and posting requirements. Questions that school boards should consider include:

1. Who in the district oversees athletic programs?
2. Has our district Title IX coordinator attended in-service and other training on Title IX? (Often Title IX coordinators are in Human Resources and may not understand that Title IX responsibilities go well beyond athletics and can include hazing, sexual harassment, etc.)
3. Have our school athletic directors attended in-service and other training on Title IX?
4. Are our schools collecting and posting the mandated information related to Title IX?
5. Does the board conduct a periodic review of data on student participation and benefits for male and female athletes in the districts’ schools? (See page 2 for areas of equivalency to consider.)

## Resources

- » **CSBA Policies**, available to GAMUT subscribers at [gamutonline.net](http://gamutonline.net):
  - › BP 0410—Nondiscrimination In District Programs And Activities
  - › BP/AR 5145.3—Nondiscrimination/Harassment
  - › BP/AR 5145.7—Sexual Harassment
  - › BP/AR 6145.2—Athletic Competition
- » **CIF Equity in Athletics webpage:** [bit.ly/2ILwKs4](http://bit.ly/2ILwKs4)
- » **CIF Participation Census Data Collection:** [bit.ly/2s8j17w](http://bit.ly/2s8j17w)
- » **California Department of Education Gender Equity/Title IX webpage:** [bit.ly/2sepuxJ](http://bit.ly/2sepuxJ)
- » **Legal Aid at Work webpage on Fair Play for Girls in Sport:** [bit.ly/2IONeiY](http://bit.ly/2IONeiY)
- » **National Women’s Law Center report, *Breaking Down Barriers: A Legal Guide to Title IX and Athletic Opportunities*:** [bit.ly/2GNPOE5](http://bit.ly/2GNPOE5)

## Endnotes

- 1 U.S. Department of Education Office for Civil Rights. (2015). *Title IX and sex discrimination*. Available at [www2.ed.gov/about/offices/list/ocr/docs/tix\\_dis.html](http://www2.ed.gov/about/offices/list/ocr/docs/tix_dis.html)
- 2 According to the California Interscholastic Federation.
- 3 California Interscholastic Federation. Participation census. Available at [bit.ly/2s8j17w](http://bit.ly/2s8j17w)
- 4 Fair Play for Girls in Sports Project. (2017). *Missing report cards: Available data show stark gender inequity in sports programs, and many California public schools shirk reporting requirement*. Legal Aid at Work. Available at [bit.ly/2KWwely](http://bit.ly/2KWwely)
- 5 U.S. Government Accountability Office, Report to Congressional Committees. (2018). *High school sports: Many schools encouraged equal opportunities, but education could further help athletics administrators under Title IX*. Available online at [www.gao.gov/assets/700/691715.pdf](http://www.gao.gov/assets/700/691715.pdf)



# Governance Brief

## The Impact of Marijuana Legalization on K-12

*Current Status and Future Expectations*

By Virginia Adams Simon

### Introduction

When the Adult Use of Marijuana Act (AUMA) was passed under Proposition 64 in November 2016, the K-12 community was unsure what to expect. After AUMA took full effect in January 2018, CSBA checked in with its Delegates at the May Delegate Assembly to assess the impact of the new law. Questions included: Were there any surprises or unanticipated impacts their districts were dealing with? Were more students using marijuana? What about teachers? Were current district policies sufficient? What support could CSBA provide?

In response, Delegates reported on a range of changes in their local educational agencies (LEAs):

- » **Increased access:** Many Delegates reported that students have greater access to marijuana because of the opening of dispensaries in many cities across the state.
- » **Increased use:** About half of the respondents felt this easier access has resulted in increased use by parents and students in their communities. Others felt the rate of usage had not increased.
- » **Difficult detection:** Many Delegates reported challenges identifying marijuana baked into everyday lunchbox items or used in vaping devices that look like pens. The challenge has especially impacted high schools.
- » **Dangerous dosage:** Several Delegates have seen increased calls to 911 due to students ingesting edible marijuana at school and not understanding the potency. In some cases, students were initially unaware they had ingested marijuana.

### In this brief you will find:

- » Issues CSBA Delegates are facing in their LEAs due to the legalization of marijuana
  - » CSBA's forthcoming resources
  - » Timing and content of federal and state marijuana policy
  - » Local and employers' rights and restrictions
  - » Additional resources
- 
- » **Normalization:** Many respondents reported that the legalization of marijuana was affecting school culture and student response to disciplinary policies. The attitude has become: "It's legal. What's the big deal?"
  - » **Staff use:** Concerns were shared regarding staff use of marijuana on campus (which remains illegal) or questionable drug-test results. Several respondents mentioned that drug testing for new teachers was becoming a problem because many were not passing the test.
  - » **Parental use:** Cases of young children coming to school smelling of marijuana because of parental use have posed a challenge to districts.
  - » **Medical marijuana:** Most Delegates reported that they need legal guidance on how to handle student medical use of marijuana.

## CSBA Forthcoming Resources

In response to these emerging trends, CSBA will be releasing a series of Governance Briefs addressing the impact of new marijuana legislation, of which this is the first. Briefs aim to answer some of the pressing questions raised by members and show how school boards from both inside and outside of California are tackling these new and complex challenges. The next brief in the series will discuss the Compassionate Use Act (Proposition 215) and the use of medical marijuana by staff and students. The third brief will share the latest scientific research on how marijuana can negatively affect brain development in children and youth, and what scientists know about the effects of second-hand exposure to marijuana smoke and vapor. CSBA will also provide a video presentation based on a session at its Annual Education Conference with key legal information and guidance regarding marijuana and K-12 schools. In addition to advocacy efforts supporting legislation and budget proposals to help assist LEAs with these issues, CSBA will use this information as a guide for staff and its Legislative Committee to support positions on legislative issues that arise related to marijuana in K-12 schools.

## Background

In 1970, the federal government passed the Controlled Substances Act, classifying marijuana as a “Schedule I” illegal substance. Schedule I drugs are deemed to have a high potential for abuse and no proven medical benefits. In the decades following the ruling, adults and young people continued to use marijuana recreationally, fueling a vast, unregulated, and international market for those growing and selling marijuana. Those caught buying, selling, or possessing marijuana have been (and still are in most states) charged with criminal violations, fines, and jail time.<sup>1</sup>

Since 1970, however, marijuana has been documented within the medical community as an alternative treatment to relieve symptoms of chronic pain, anxiety, and some types of seizures. In 1996, California voters passed Proposition 215, called the Compassionate Use Act, which decriminalized the use of marijuana for medicinal purposes for anyone deemed qualified by a licensed physician. This law did not change Education Code (48900 and 48915) and therefore did not, and does not, enable students or staff of any age to use marijuana on school campuses, even for medicinal purposes.

Year	Federal	State of California
1970	The <b>Controlled Substances Act</b> classifies marijuana as a “Schedule I” illegal substance.	
1996		Proposition 215, called the <b>Compassionate Use Act</b> , decriminalizes the use of marijuana for medicinal purposes for qualified <sup>2</sup> adults 18 or older. Qualified minors are legal users with parental consent.
2013	Under President Barack Obama, the <b>Cole Memo</b> states that the federal government will not prosecute drug cases for medical marijuana in states where it is legal, thereby respecting states’ rights.	
2016		<b>Adult Use of Marijuana Act</b> (Proposition 64), passes and California joins seven others states and D.C. in legalizing recreational marijuana, along with strict regulatory restrictions as well as taxation.
2018	Attorney General Jeff Sessions rescinds the <b>Cole Memo</b> .	

## U.S. and California Marijuana Policy

In 2013, President Barack Obama issued the Cole Memo stating that the federal government would not prosecute drug cases for medical marijuana in states where this was legal, thereby respecting states’ rights.

Since 2013, 30 states have legalized marijuana in some form. Most of those have legalized medical marijuana to some degree, but eight states (including California) and the District of Columbia have passed the most expansive laws legalizing both medical and recreational use and implementing marijuana taxes.

On January 4, 2018, three days after California fully enacted the California Adult Use of Marijuana Act, Attorney General Jeff Sessions rescinded the Cole Memo. What this means for Californians and others in states where marijuana has been legalized is still unclear. Many see this move as a shot across the bow, signaling the Trump administration’s desire to be tougher on marijuana and slow the tide of other states seeking to legalize recreational use.

Where does that leave K-12 schools? What changed and what didn’t? California’s AUMA, in combination with current Education Code (48900 and 48915), makes it clear that marijuana (in any form, for medical use or otherwise) is still

prohibited on school campuses. Our next impact brief will cover in greater detail the nuances of medical marijuana use in schools. Several pending legal actions (noted below) will affect district and county office of education policy in the future. For now, here is a simple breakdown:

In all California K-12 public schools it is illegal to use or be under the influence of marijuana on a public school campus regardless of whether you have a medical marijuana card. The definition of “under the influence” is left ambiguous. CSBA’s sample policy (BP 4020 – Drug and Alcohol-Free Workplace) provides the following definition: “Under the influence means that the employee’s capabilities are adversely or negatively affected, impaired, or diminished to an extent that impacts the employee’s ability to safely and effectively perform his/her job.”

While the use of marijuana in schools is still illegal under federal law and State Education Code, criminalization has been replaced with a wider acceptance or “normalization” of marijuana use. This normalization is felt by schools when students and their parents test the limits of the law and challenge LEA policy. “What’s the big deal?” they might say. “It’s legal now.” Parent and student education programs can help mitigate these attitudes. See examples of education campaigns from other states in “Additional Resources” section of this brief.

### AUMA Proposition 64 Snapshot

Legal in California	Not Legal in California
Sale and purchase (not more than 1 oz./day) of marijuana for adults 21 and over through a licensed (Type “A”) marijuana dispensary. [HSC 11362.1(a)(1) and (2)].	Smoking, vaping, or consuming marijuana in any public space or on public property (\$100 infraction) or smoking marijuana on federal property (including federal parks and recreation sites) [HSC 11362.3 - 11362.4].
Smoking marijuana in your home or on private property for adults 21 and over.	Smoking, vaping, or consuming marijuana within 1,000 feet of a school, daycare center, or youth center while students are present (\$250 fine). [11362.3a(5)]
Growing marijuana in your home (no more than six live plants) for adults 21 and over. [HSC 11362.1(a)(3)]	Using medical marijuana on a K-12 school campus even with a medical marijuana card.
Sale and purchase of medical marijuana for people 18 and older through a licensed (Type “M”) dispensary with a medical marijuana card. Minors must have parental consent to obtain a medical marijuana card.	Selling medical marijuana without a Type M license to anyone without a doctor’s recommendation or medical marijuana card.
	Having school staff dispense medical marijuana to students.
	Driving under the influence [Vehicle Code 23152] and using marijuana while driving or in possession of open container. [Vehicle Code 23220 & 23221]

District and county boards may also need to educate/remind parents and community members of the aspects of California law that have not changed with the enactment of AUMA.

In California, it is still illegal to:

- » Smoke, vaporize, or consume marijuana in any public space or on public property (\$100 infraction).
- » Smoke, vaporize, or consume marijuana within 1,000 feet of a school, daycare center, or youth center while students are present (\$250 fine).
- » Use medical marijuana on campus even with a medical marijuana card (see CSBA Board Policy (BP) 3513.4 - Drug and Alcohol-Free Schools and updated BP 5113.6 - Alcohol and other Drugs).
- » Have school staff dispense medical marijuana to students.

## Local Rights and Restrictions

Trustees should be aware of any restrictions their local governments or municipalities have imposed related to the opening of dispensaries or of cultivation areas. Local governments may impose reasonable restrictions on cultivation. Local governments are also free to prohibit outdoor cultivation altogether until adult use is legal under federal law. (HSC 11362.2[b]). Finally, local governments can restrict or ban dispensaries within city limits. Delivery services can still operate in regions that don't allow dispensaries. Some localities have banned deliveries completely, although the legality of this could be challenged in the future. Some cities are working to create public spaces or lounges for adult smoking or vaping of marijuana.

Retail sales of marijuana are subject to the standard state sales and use tax of 7.5 percent to 9.25 percent, plus an additional 15 percent state retail excise tax. Localities also have the right to assess additional excise taxes.<sup>3</sup> Users with a state medical cannabis ID card are exempt from the sales tax on medical marijuana products.

## Employers' Rights and Restrictions

The California Supreme Court offers no protection for employees when it comes to the use of marijuana, even for medicinal purposes. In a landmark 2008 Supreme Court case (*Ross v. RagingWire Telecommunications*) the plaintiff was open about using medicinal marijuana for chronic back pain during his interview process at RagingWire, and was offered the job. The offer of employment was rescinded when Ross failed the pre-employment drug test. He sued the company under California's Fair Housing and Employment Act and lost.

The court ruled that the Compassionate Use Act (Proposition 215) does not specify rights for employers or employees.

School districts and county offices of education have the right to create policies that exclude people who fail their drug tests from being hired, even if they possess a medical marijuana card. LEAs can also require regular drug tests for employees in "safety sensitive" positions. This has not been directly challenged in the school context, but anyone working with students is arguably in a safety sensitive position. Blanket drug testing of existing employees without probable cause for wrongdoing has been deemed unconstitutional by the 9th Circuit Court. CSBA has sample board policies addressing drug testing (BP/AR 4112.41/4212.41/4312.41) and urges LEAs to provide justification for their drug screening programs by identifying the specific positions and the duties of those positions that necessitate the need for testing. CSBA also strongly recommends that districts consult legal counsel as part of this process.

## Frequently Asked Questions

**Question:** Parents are using marijuana in the privacy of their homes and cars. Students are being exposed to second-hand smoke and coming to school smelling of marijuana. What can schools do?

**Answer:** While it may be legal for parents to smoke or vape in their homes, it is not legal for them to do so in a car. Schools will need to educate parents on the dangers and risks of second-hand smoke, which can produce a "high" in those exposed in poorly ventilated spaces. This can lead to a failed drug test. This could also have Welfare and Institution Code implications—under child dependency laws, a parent can engage in legal activity that results in child neglect or endangerment that rises to the level of quasi-criminal or even criminal offense. This could also open the door to questions about mandatory reporting.

The smell of marijuana on clothing may trigger disciplinary consequences if LEAs articulate this as "reasonable cause" for a drug search. CSBA BP 5145.12 – Search and Seizure notes: "The Fourth Amendment of the U.S. Constitution which prohibits unreasonable search and seizure also applies to students in the school setting. In *New Jersey v. T.L.O.* [1985], the U.S. Supreme Court held that the legality of a search of a student and/or his/her belongings depends on whether the search is "reasonable." The "reasonableness" of a search depends on two factors: (1) whether there is individualized suspicion that the search will turn up evidence of a student's violation of the law or school rules and (2) whether the search is reasonably related to the objectives of the search and not excessively intrusive in light of the student's age, gender, and/or the nature of the infraction.

**Question:** What can school board members do if they are concerned about the opening of too many dispensaries in their communities?

**Answer:** Cities and counties have the right to ban all marijuana businesses through a city or county ordinance. However, by doing so, the city or county will not receive any tax revenue from local sales of marijuana. You are encouraged to reach out to your local city council members and mayors' offices about new ordinances, or special permits or licenses they are requiring.

**Question:** How much tax revenue is expected, and how much will school districts receive?

**Answer:** California's Legislative Analyst's Office (LAO) reported in its May 2018 [Cannabis Tax Revenue Update](#) that the state had collected \$34 million in cannabis excise tax revenue in the first quarter. Original January estimates by the administration were for a total of \$175 million in 2017–18. Based on the low first quarter total, predictions are that the annual revenue will be less than the \$175 million predicted. In terms of how much schools will receive; the answer remains unclear. There is a long list of recipients that will receive specific funds first for research and enforcement, such as public universities and law enforcement. Of any remaining funds, 60 percent are to be allocated to the Department of Health Care Services to fund youth prevention and education programs. There are no funds dedicated specifically to the California Department of Education, but any remaining funds may go to schools for drug prevention programs. Local cities and counties can assess additional excise taxes and target them directly to specific educational programs.

Other states have experienced the unpredictability of revenues after legalization. For example, Colorado was successful in passing its recreational marijuana use law (Amendment 64) in 2014 in large part because of the tax revenues that were promised to the Colorado Department of Education (CDE) for capital construction improvements to schools, literacy grants, bullying prevention, and other education priorities. Revenue rates were high in the first year of legalization (\$86.3 million for CDE) but dipped to \$48.5 million to CDE in 2016–17. The most recent revenues (2017–18) have rebounded to \$90.3 million.<sup>4</sup> Oregon and Washington have also collected revenues more slowly than projected but are gaining significant ground. Oregon designates 40 percent to public schools, which provided \$34 million last year. Washington puts the majority of its revenue in the general fund, with public education receiving a small share.

## Questions for Board Members to Consider

- » Do board members and staff have a clear understanding of what is legal and what is not under the California Adult Use of Marijuana Act?
- » Does our board have a plan for sharing information with stakeholders (board, district staff, educators, family and community, students as appropriate) that can help clarify this issue?
- » Are board members and staff aware of local government or municipality restrictions on the opening of dispensaries and/or cultivation of marijuana and is there an LEA plan for ensuring that stakeholders are aware of these restrictions?
- » Do we have LEA policies on hiring applicants with medical marijuana cards who may fail drug tests? If not, do we have a plan for developing such a policy?
- » Does our LEA have a drug-use prevention plan in place?

## Additional Resources

### California Resource Links

California Department of Education has dedicated a page of data and resources to AUMA: [www.cde.ca.gov/ls/he/au/](http://www.cde.ca.gov/ls/he/au/)

California Department of Public Health provides a number of resources and communications tools on its "Let's Talk Cannabis" pages: [www.cdph.ca.gov/Programs/DO/letstalk-cannabis/Pages/legal.aspx](http://www.cdph.ca.gov/Programs/DO/letstalk-cannabis/Pages/legal.aspx)

California State Association of Counties provides a useful fact sheet for local governments: [www.counties.org/sites/main/files/file-attachments/local\\_government\\_reference\\_guide\\_to\\_prop\\_\\_64\\_final\\_11-22-16.pdf](http://www.counties.org/sites/main/files/file-attachments/local_government_reference_guide_to_prop__64_final_11-22-16.pdf)

### Education and Communications Examples from Other States

The Colorado Department of Health & Environment launched a media campaign in 2015 to educate Colorado residents and visitors about the safe, legal, and responsible use of retail marijuana: [responsibilitygrowshere.com/](http://responsibilitygrowshere.com/)

Colorado Department of Public Safety hosts a resource center focusing on marijuana use for communities, including this fact sheet for parents: [bit.ly/2OZ47Oo](http://bit.ly/2OZ47Oo)

Washington Healthcare Authority website for parents:  
[www.starttalkingnow.org](http://www.starttalkingnow.org)

Oregon Health Authority website to educate teens:  
[www.staytrueto.org](http://www.staytrueto.org)

## Policy Resources

CSBA recommended policy language is available to GAMUT subscribers.

The California Association of School Business Officials May 2017 webinar providing an overview of Proposition 64 and its policy implications for schools, presented by Lozano Smith Associates: [www.casbo.org/content/lozano-smith-impact-marijuana-legalization-schools-proposition-64](http://www.casbo.org/content/lozano-smith-impact-marijuana-legalization-schools-proposition-64)

Colorado Department of Public Health and Environment published this 2015 list of best practices for policies to limit youth access to marijuana: [Effective Policies & Programs to Restrict Youth Access & Exposure to Drugs/Alcohol Applications for Marijuana](#).

**Dr. Virginia Adams Simon** is an independent education consultant who has more than 18 years of experience in education policy and school reform.

## Endnotes

- 1 Possession of marijuana is punishable by up to one year in prison for first offense under Federal Law. See [www.USSC.gov](http://www.USSC.gov)
- 2 To be a qualified medical marijuana user, you must have a recommendation from a physician. Medical Marijuana cards are also issued (but not required under law) by most municipalities.
- 3 Proposition 64 Revenues (2017). Legislative Analyst's Office. Retrieved from [lao.ca.gov/handouts/crimjust/2017/Proposition-64-Revenues-021617.pdf](http://lao.ca.gov/handouts/crimjust/2017/Proposition-64-Revenues-021617.pdf)
- 4 See: [www.cde.state.co.us/communications/20180427mjfactsheet](http://www.cde.state.co.us/communications/20180427mjfactsheet)

# Governance Brief

## The Impact of Marijuana Legalization on K-12

### *Use of Medical Marijuana in Schools*

By Virginia Adams Simon

### Introduction

At the May 2018 Delegate Assembly, CSBA conducted focus groups with its Delegates about how the Adult Use of Marijuana Act (AUMA),<sup>1</sup> which took effect in January 2018, was affecting their schools. Board members expressed the need for information about a variety of issues related to marijuana legalization and K-12 schools. In response, CSBA is releasing a series of briefs designed to provide the answers to some of the pressing questions raised by members and provide examples from both inside and outside California about how school boards are tackling these new and complex challenges.

A principal area of concern and confusion voiced by board members in the focus groups was the use of medical marijuana in K-12 schools. This brief, the second in CSBA's series on marijuana, provides information on the Compassionate Use Act (Proposition 215)<sup>2</sup> and the use of medical marijuana by staff and students.

### Background

The first brief in this series, "The Impact of Marijuana Legalization on K-12: Current Status and Future Expectations,"<sup>3</sup> outlined the history of marijuana legalization in California beginning with Proposition 215, the Compassionate Use Act (CUA) of 1996. With the CUA, California became the first state in the U.S. to legalize the use of marijuana for medicinal purposes. Today, 30 states and the District of Columbia have laws that legalize the use of medical marijuana. However, the federal government classifies marijuana as a Schedule I illegal substance under the Controlled Substances Act of 1970. Schedule I drugs are deemed to have a high potential for abuse and no proven medical benefits. In 2003, with the passage of Senate Bill 240, California adopted specific language to codify medical

### In this brief you will find:

- » Definition of medical marijuana
- » Details regarding the Compassionate Use Act and how it applies to children
- » School district and LEA rights and restrictions regarding medical marijuana use by students and staff
- » Recently vetoed legislation (SB 1127) on medical marijuana in schools
- » Pharmaceutical advances

marijuana use and establish the Medical Marijuana Program (MMP)<sup>4</sup> and state ID card system [HSC 11362.7].<sup>5</sup> This legislation extends to children and youth who qualify for the MMP and have parental permission.

### Medical Marijuana

The main chemical associated with marijuana's high is called Tetrahydrocannabinol, or THC. THC is derived from the resin of the female marijuana plant's leaves and buds. Depending on the concentration of THC in a dosage of marijuana and whether it is inhaled or ingested, the psychoactive effects can be immediate or delayed, short or longer lasting. Over 100 chemical compounds can also be produced by the plant that are chemically related to THC. These are called cannabinoids.<sup>6</sup>



A commonly used compound of the marijuana plant is cannabidiol, or CBD. This is the main ingredient in many medical marijuana treatments. In medical marijuana, CBD is often used in higher concentrations than THC and in some cases, the THC in medical marijuana treatments is negligible. Nonetheless, CBD and THC have many of the same medical benefits and there is evidence that they can relieve some of the same symptoms, including inflammation, nausea related to chemotherapy, and stimulate the appetite of those with cancer or AIDS.<sup>7</sup>

CBD can also be derived from the hemp plant, a plant that is often confused with marijuana. Hemp is in the same family of cannabis plants as marijuana but contains less than 0.3 percent THC. Hemp is also considered a Schedule I illegal substance by the federal government. CBD oils and food products made from marijuana (not hemp) by licensed medical marijuana cultivators and distributors are regulated by the Manufactured Cannabis Safety Branch (MCSB) of the California Department of Public Safety (CDPS), Food and Drug Branch (FDB). Industrial hemp is not regulated; therefore, it is not a legal source of CBD in California except for research purposes.<sup>8</sup>

## The Problem

The Adult Use of Marijuana Act (Proposition 64) provisions did not change California Education Code (48900 and 48915),<sup>9</sup> meaning that it remains illegal to possess or consume controlled substances on a school campus. Therefore, students of any age are unable to use medical marijuana while at school. Existing law allows schools to legally administer any pharmaceutical drug, including opioids, that a child has been prescribed.<sup>10</sup> There are, nonetheless, medical conditions pharmaceuticals do not address, and these conditions often have debilitating symptoms. Medical marijuana has been found to help lessen some of these challenging symptoms. Parents across the nation have had success treating their children with medical marijuana when no pharmaceutical has worked for them. For example, a randomized, double-blind, placebo-controlled trial found medical marijuana to be effective for treating seizures associated with Lennox-Gastaut Syndrome, a type of epilepsy.<sup>11</sup>

The federal Individuals with Disabilities Education Act (IDEA) requires schools to provide accommodations for all children to attend school. Since it is illegal for students to take their medical marijuana on campus at public schools or for school staff to administer this medication, school districts and county offices of education (collectively known as local educational agencies or LEAs) have limited options to accommodate students who use medical marijuana. One option is to allow parents to take students off campus to administer the medication themselves, thus interrupting the child's education.

In a recent well-publicized case in Illinois, a child required a marijuana patch and drops to be administered throughout the school day to stave off seizures caused by leukemia treatments. Under Illinois education code, as in California, it is illegal for students to use these treatments on a school campus and for school staff to administer them. The 11-year-old was unable to attend school under those conditions and the parents sued the district, citing IDEA. Ultimately, the Illinois Attorney General agreed not to prosecute the school district staff for administering the treatments and the federal judge involved in the case issued an emergency order allowing the student to return to school. The emergency ruling only applies to this specific case and does not cover other children or school districts in the state.<sup>12</sup>

## California Senate Bill 1127—Jojo's Act

In California, similar cases have emerged. Jojo, a San Francisco high school student, has a severe form of epilepsy that was causing up to 50 seizures a day. He was being treated successfully with medical marijuana, but his mother had to interrupt his school day by taking him off campus to administer the drug. Her efforts to change this led to the introduction of SB 1127 by Senator Jerry Hill (D-San Mateo) in February 2018.<sup>13</sup> In addition, a September 21, 2018 order from the Office of Administrative Hearings (OAH) in *Student v. Rincon Valley Union Elementary School District* ruled that the school district must allow a student's nurse to administer medical marijuana on campus as needed for the student's seizures. The decision is not binding on other school districts.<sup>14</sup>

SB 1127 would have enabled (but not required) school boards to create policies that would allow parents to administer their child's treatment on campus. The states of Washington, Florida, Colorado, New Jersey, and Maine have recently passed legislation similar to that proposed in SB 1127. After the California Senate and Assembly passed the bill earlier this summer, it was vetoed by Governor Jerry Brown on September 28, 2018. His veto memo stated that he felt the bill was not specific enough regarding requirements for medically qualified students and went "too far" in allowing marijuana on school campuses.<sup>15</sup> Senator Hill has indicated that he will reintroduce the bill.

## New Drug to Watch

A promising development in the pharmaceutical industry may bring relief to students with some forms of severe seizure disorders without requiring medical marijuana. A new drug was approved by the U.S. Food and Drug Administration (FDA) in June 2018 for the treatment of severe seizures. This drug, called Epidiolex, contains a synthetic form of CBD. In September 2018 the Drug Enforcement Agency changed the classification of Epidiolex from a Schedule I drug—the

most restrictive of the Controlled Substances Act (CSA), to a schedule V, the least restrictive of the CSA, thus allowing pharmaceutical companies to begin to sell it legally.<sup>16</sup> This will mean that according to California Education Code if doctors are able to prescribe the drug to patients who qualify, then school personnel would be allowed to administer it.<sup>17</sup>

## Frequently Asked Questions

**Question:** Will students who are taking medical marijuana before coming to school be “high”?

**Answer:** As stated above, THC is the component of the marijuana plant that creates the relaxed sensations and other physical and psychological effects that we call high. Most medical marijuana compounds contain extremely low levels of THC and higher levels of CBD. Students should not exhibit signs of intoxication or a high.

**Question:** What if a family requests that medical marijuana be part of a student’s Individualized Education Program (IEP) or 504 plan?

**Answer:** Since medical marijuana is a not an intervention that schools can administer legally at this time, it should not be made part of a student’s IEP or 504 plan.

**Question:** Some students need to carry oil with them to use throughout the day for seizures. Is this allowed?

**Answer:** No. Under current law, students are not permitted to possess medical marijuana on campus in any form.

## Questions for Board Members to Consider

1. Has your governance team considered how it will respond with a unified voice to questions from the community about medical marijuana?
2. What is your LEA’s policy regarding current employees who use marijuana for a documented medical condition?
3. What is your LEA’s policy for hiring new employees who use marijuana for a documented medical condition?
4. How does your LEA document and handle the absences of students who leave campus to be administered medical marijuana?

*The next brief in this series will explore in more detail the effects of marijuana on the brain. It will examine the current research findings about both harmful and helpful effects on children and adults.*

## Resources

The National Institute of Health (NIH) offers extensive information on medical marijuana with current research and resources here: [nccih.nih.gov/health/marijuana](https://nccih.nih.gov/health/marijuana)

Harvard Medical School offers this overview of medical marijuana facts: [www.health.harvard.edu/staying-healthy/medical-marijuana-know-the-facts](https://www.health.harvard.edu/staying-healthy/medical-marijuana-know-the-facts)

California’s Department of Health maintains facts and resources regarding California’s medical marijuana program: [www.cdph.ca.gov/Programs/CHSI/Pages/MMP-FAQS.aspx](https://www.cdph.ca.gov/Programs/CHSI/Pages/MMP-FAQS.aspx)

The National Conference of State Legislatures (NCSL) website tracks policy trends, updates and research on marijuana legalization across the country: [www.ncsl.org/bookstore/state-legislatures-magazine/marijuana-deep-dive.aspx](https://www.ncsl.org/bookstore/state-legislatures-magazine/marijuana-deep-dive.aspx)

### Sample school district policies from outside California

Cherry Creek School District, Colorado: [Administering Medical Marijuana to Students on School Property](https://bit.ly/2R5DKUi) <https://bit.ly/2R5DKUi>

Springfield NJ: Administering Medical Marijuana to Students on School Property <https://bit.ly/2D51gxQ>

Regional School Unit 40. Union, Maine: Administering Medical Marijuana to Students on School Property Union, Maine. Policy for Administering Medical Marijuana to Students on Campus: <https://bit.ly/2AovZmO>

Administrative School District Unit 49, Maine: Administering Medical Marijuana to Students on School Property <https://bit.ly/2yy5Pgb>

CSBA new sample policy BP 3513.4 - Drug and Alcohol Free Schools and recently updated policy BP 5131.6 - Alcohol and Other Drugs are available to GAMUT subscribers at [www.csba.org/gamutonline](https://www.csba.org/gamutonline).

**Dr. Virginia Adams Simon** is an independent education consultant who has more than 18 years of experience in education policy and school reform.

## Endnotes

- 1 Adult Medical Use of Marijuana Act of 2016: [leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201720180AB64](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB64)
- 2 Compassionate Use Act of 1996: [leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?sectionNum=11362.5.&lawCode=HSC](http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=11362.5.&lawCode=HSC)
- 3 The Impact of the Legalization of Marijuana on K-12: Current Status and Future Expectations: [www.csba.org/GovernanceAndPolicyResources/ResearchAndPolicyBriefs](http://www.csba.org/GovernanceAndPolicyResources/ResearchAndPolicyBriefs)
- 4 California's Medical Marijuana Program legislation: [leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?sectionNum=11362.7&lawCode=HSC](http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=11362.7&lawCode=HSC)
- 5 California Medical Marijuana Card information: [www.cdph.ca.gov/Programs/CHSI/Pages/Medical-Marijuana-Identification-Card.aspx](http://www.cdph.ca.gov/Programs/CHSI/Pages/Medical-Marijuana-Identification-Card.aspx)
- 6 NIDA Drug Facts [www.drugabuse.gov/publications/research-reports/marijuana/what-marijuana](http://www.drugabuse.gov/publications/research-reports/marijuana/what-marijuana)
- 7 Medical Marijuana FAQ Retrieved from [www.webmd.com/a-to-z-guides/medical-marijuana-faq](http://www.webmd.com/a-to-z-guides/medical-marijuana-faq)
- 8 California Department of Public Safety policy on industrial hemp: [www.cdph.ca.gov/Programs/CEH/DFDCS/CDPH%20Document%20Library/FDB/FoodSafetyProgram/HEMP/Web%20template%20for%20FSS%20Rounded%20-%20Final.pdf](http://www.cdph.ca.gov/Programs/CEH/DFDCS/CDPH%20Document%20Library/FDB/FoodSafetyProgram/HEMP/Web%20template%20for%20FSS%20Rounded%20-%20Final.pdf)
- 9 CA Ed Code 48900-48915: Pupil Rights and Responsibilities [leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?lawCode=EDC&sectionNum=48900](http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=EDC&sectionNum=48900).
- 10 A physician cannot write a prescription for medical marijuana because of its Federal Schedule I status but can write a letter for recommended use which enables a minor to obtain a medical marijuana card and for their parent or guardian to purchase or grow marijuana in their home for their use.
- 11 Thiele, Elizabeth A, et al. "Cannabidiol in patients with seizures associated with Lennox-Gastaut syndrome." *The Lancet*, 26 Jan. 2018, [www.sciencedirect.com/science/article/pii/S0140673618301363](http://www.sciencedirect.com/science/article/pii/S0140673618301363).
- 12 Illinois Medical Marijuana Case: [www.cnn.com/2018/01/22/health/medical-marijuana-school-illinois/index.html](http://www.cnn.com/2018/01/22/health/medical-marijuana-school-illinois/index.html)
- 13 See Senate Bill 1127: [leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201720180SB1127](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB1127)
- 14 Decision of the Office of Administrative Hearings State of California, *Parent on Behalf of Student v. Rincon Valley Elementary School District*. Retrieved from [www.documents.dgs.ca.gov/oah/seho\\_decisions/2018050651.pdf](http://www.documents.dgs.ca.gov/oah/seho_decisions/2018050651.pdf)
- 15 See Governor's Veto Memo on SB 1127: [www.gov.ca.gov/wp-content/uploads/2018/09/SB-1127-Veto.pdf](http://www.gov.ca.gov/wp-content/uploads/2018/09/SB-1127-Veto.pdf)
- 16 See FDA press release at: [www.fda.gov/newsevents/newsroom/pressannouncements/ucm611046.htm](http://www.fda.gov/newsevents/newsroom/pressannouncements/ucm611046.htm)
- 17 See California Education Code Section 49423 Article 2. Employment of Medical Personnel Retrieved from [leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?lawCode=EDC&sectionNum=49423](http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=EDC&sectionNum=49423).



November 2018

# Governance Brief

## The Impact of Marijuana Legalization on K-12

*The Effect of Marijuana on the Brain*

By Virginia Adams Simon

### Introduction

The first of three briefs in CSBA's series on the effects of the legalization of marijuana on K-12 schools<sup>1</sup> reviewed how the decriminalization of marijuana for adult use under Proposition 64, the Adult Use of Marijuana Act of 2016,<sup>2</sup> has impacted school policy and student and staff access to marijuana products. The second brief reviewed the Compassionate Use Act (Proposition 215) of 1996<sup>3</sup> and how it impacts the use of medical marijuana for students and staff on campus.

This final brief provides information about the harmful and helpful aspects of marijuana use and exposure for youth. The goal is to offer some basic facts and current research that will help school district and county office of education boards and their communities make intelligent and effective decisions about policy approaches, community partnerships, resource allocation, and educational programs.

### What is Marijuana?

Marijuana is a species of plant that has many varieties and chemical variants. The two varieties most commonly used and cultivated for recreational and medicinal use are the Cannabis Sativa and the Cannabis Indica plants. Both are green, leafy plants that produce flowers and seeds that are dried and used to produce what we know as marijuana. Marijuana can be smoked like tobacco, inhaled as a vapor, brewed in tea, mixed into food, or extracted as oil and applied directly to the tongue or skin. What is unique about these two varieties of cannabis plants is the complex range of over 500 chemicals that they contain and that can be extracted for a variety of uses from different parts of the buds or flowers.

#### THC

The main chemical associated with marijuana's high is called Tetrahydrocannabinol, or THC. THC is derived from the resin of the female plant's leaves and buds. Depending on the

#### In this brief you will find:

- » Definitions of the difference between medical marijuana and medicinal marijuana.
- » The latest brain research on the effects of short- and long-term use of recreational marijuana and the adolescent brain
- » What we know about the effects of second-hand marijuana smoke on children and infants.

concentration of THC in a dosage of marijuana and whether it is smoked, inhaled or eaten, the psychoactive effects can be immediate or delayed, short or longer lasting. Over 100 additional chemical compounds related to THC can be produced by the plant. These are called Cannabinoids.<sup>4</sup>

#### CBD

The most commonly used compound of the marijuana plant is Cannabidiol, or CBD. CBD and THC work together to activate neurons in the brain in ways that have been shown to be both helpful for relief of medical conditions and stimulating in psychoactive ways. For medical purposes, CBD is typically used in higher concentrations than THC. In some cases, the THC in medical marijuana is negligible. For recreational purposes, however, THC levels can be much higher, causing physical and psychological effects such as euphoria, lack of coordination, disorientation, paranoia, and hunger. CBD can also be derived from the hemp plant, another member of the cannabis family. Hemp, unlike Cannabis Sativa or Indica, is not regulated by the

California Department of Public Health (CDPH), but by the California Department of Food and Agriculture (CDFA). A 2014 Farm Bill<sup>5</sup> under President Obama allowed for the cultivation of industrial hemp for research purposes only. This led to some confusion among producers of industrial hemp CBD product manufacturers. The later legalization of marijuana in California led to further confusion. CBD oils and products from hemp are still popular items in the marketplace but are technically illegal. The extent to which local law enforcement is choosing to crack down on these sales varies across the state. You may continue to see cannabis massage oils, cannabis-infused beverages, or even pet products with CBD to help calm an anxious pet. These are considered illegal CBD food products unless they are produced with a proper license.<sup>6</sup>

## Health Risks of Recreational Use

What does the current research say about the effects of marijuana consumption on our health? And what do we know about the health effects on youth? As we discussed in the previous two briefs in this series, medicinal marijuana continues

to be studied as a treatment for a variety of health issues, from chronic pain to seizure disorders, anorexia, and even as a means for curing opioid addiction. The concentration of THC in medicinal products, however, is generally very low and in some cases nonexistent. Nonetheless, THC is used to treat some of the same conditions as CBD in medical marijuana. The risk of occasional recreational use of marijuana for adults where THC is found at higher levels is a different question and a matter of continued debate and research.

The research on the effects of heavy, long-term use as well as use that begins in adolescence, however, is substantial, indicating that:

1. Critical regions of the brain that control memory, reasoning, judgment, and coordination develop during adolescence.
2. THC activates a part of the brain called the Endocannabinoid (EC) system.
3. The presence of THC in the EC system overwhelms the flow of neurons that send messages all over the body

**Table 1: Recreational Marijuana Use: Short and Long-Term Effects**

Short-Term, Occasional Use	Long-Term Use Beginning in Adolescence
<p><b>Impaired short-term memory:</b> The part of the brain that controls memory is connected to the EC system. Introduction of THC into these neural pathways disrupts memory of recent events.</p>	<p><b>Addiction:</b></p> <ul style="list-style-type: none"> <li>» 16 percent of teenagers who experiment with marijuana will become addicted to it.</li> <li>» Of those who become daily users, 25–50 percent will become addicted to marijuana and potentially other drugs or alcohol.</li> <li>» Teenage users of marijuana are two to four times more likely to become addicted than adult users.</li> </ul>
<p><b>Impaired coordination:</b> The part of the brain that perceives spatial relationships and body awareness is connected to the EC system and is disrupted. Car accidents occur in high numbers by those who drive after consuming marijuana.</p>	<p><b>Altered brain development:</b></p> <ul style="list-style-type: none"> <li>» Adults who used marijuana regularly in adolescence show reduced neural connectivity in the brain in the prefrontal cortex and hippocampus. These regions control executive function, memory, and learning.</li> </ul>
<p><b>Altered judgment:</b> The part of the brain that controls executive function or impulse control is connected to the EC system. THC can disrupt this connection, causing impulsive behavior, including risky sexual behavior.</p>	<p><b>Cognitive impairment and lowered IQ:</b></p> <ul style="list-style-type: none"> <li>» Poor educational outcomes with increased likelihood of dropping out of school</li> <li>» Impact on brain development described above is seen as a likely reason for this result.</li> </ul>
<p><b>Paranoia and psychosis:</b> High doses of THC have been shown to cause extreme psychotic episodes in some users.</p>	<p><b>Diminished life satisfaction and achievement:</b></p> <ul style="list-style-type: none"> <li>» Surveys of adult, long-term marijuana users (who began using in adolescence) found them to be less satisfied with their achievement of life goals compared to nonusers.</li> </ul>

and control movement, perception, memory, and in some cases, emotion.<sup>7</sup> Introducing THC during a critical period in the brain's development (e.g., adolescence) alters the brain's ability to establish important connections to these systems in the brain.

4. Early and regular use of marijuana in adolescence can lead to addiction, use of other illicit drugs, and mood disorders.<sup>8</sup>

A National Institute of Health (NIH) peer-reviewed study examining the current research landscape found the strongest evidence, across multiple studies, for the short- and long-term effects of marijuana use as outlined in Table 1.<sup>9</sup>

## Other Exposure that Affects Children and Youth

Research is still emerging regarding the effects of second-hand marijuana smoke as well as fetal exposure, but it is currently known that:

### 1. Use of marijuana by parents with children in the home is increasing<sup>10</sup>

A 2015 study of trends in tobacco and marijuana use by parents with children at home showed that between 2002 and 2015 tobacco use declined by 8 percent in parents with children at home while smoking cannabis increased by 2 percent. The same study found:

- » The highest percentage of marijuana smokers were young parents (age 18–25) who are also cigarette smokers.
- » Cigarette smokers were significantly more likely (almost four times) to be marijuana smokers.
- » Low-income communities had the highest percentage of marijuana smokers in the household.<sup>11</sup>

### 2. Second-hand cannabis smoke exposure has negative effects<sup>12</sup>

Another NIH review of recent research on the effects of second- and third-hand marijuana smoke exposure found strong evidence that:

- » Exposure in non-ventilated rooms or automobiles to second-hand marijuana smoke produces mild psychoactive effects.
- » THC levels are detectable in oral and urine tests given to passive inhalers.

### 3. Pregnant and breast-feeding mothers using marijuana are exposing infants to THC<sup>13</sup>

- » Fetal exposure to THC is in the early stages of research, but some researchers believe that what is known about the Endocannabinoid system and its early development in utero is definitive. Some see fetal exposure to THC as an early assault on a system that controls multiple functions in human development resulting in unknown, negative consequences. At least one study has identified a specific gene expression (D (2) mRNA) that is affected by maternal use of marijuana during pregnancy. This gene expression impacts the neural systems that regulate emotional behavior.<sup>14</sup>
- » Research indicates that even mothers who are regular marijuana users who abstain from use during pregnancy should be aware of the effects of resumed use if they are breast-feeding a newborn. Studies have shown that low-levels of THC from inhaled marijuana are detectable in breast milk.<sup>15</sup>

## Research Limitations

It should be noted that there are several factors that hinder researchers' full understanding of the long-term effects of marijuana use and will require further study and attention:

1. It is difficult to separate the effects of marijuana use from other drug effects in subjects who use marijuana along with other narcotics. Therefore, long-term effects may vary depending on what else someone was consuming, at what levels, and at what period of their growth and development. This holds true for in-utero studies as well.
2. THC levels in marijuana have been steadily rising over the course of approximately 30 years of research. Marijuana samples taken in the 1980s averaged 3 percent THC and in 2012 averaged 12 percent, so older research should be viewed with this in mind. This increase is also seen as a possible explanation for a current rise in car accidents and emergency room visits associated with marijuana use.<sup>16</sup>

## Implications for School Boards

How can school boards support school districts and county offices of education in their communities as they roll out their education programs for students, teachers, parents, and community members? If we know that children's emotional and behavioral health is impacted either directly or indirectly by exposure to marijuana from a very young age, any approach must touch the parents of the very youngest children, elementary schools, as well as middle and high

schools. This is not just a teenage problem. Partnerships between schools, districts, counties, cities, and community groups are beginning to emerge across California to tackle this task. Following are some examples of these partnerships.

## Partnerships for Public Information

The California Department of Public Health (CDPH) launched a public information campaign in 2016 called “Let’s Talk Cannabis”<sup>17</sup> that provides a comprehensive set of resources and tools for communities to provide accurate information and educational materials about marijuana. This includes social media resources, community tool kits, and information for parents and teens. County Health Departments such as in Butte<sup>18</sup> and Los Angeles counties<sup>19</sup> have partnered with CDPH to create their own websites and customized resources for their communities.

Recently, the city of Pasadena launched a health education campaign about marijuana, called “Smoke is No Joke,” which posts educational information on city buses.<sup>20</sup> It was created with input from several local youth organizations and Rose City High School students.

## Examples from Other States

States that legalized recreational marijuana before California have launched and evaluated a variety of public information campaigns. They have also utilized partnerships between community groups and local governments, such as Vancouver, Washington’s “Weed Can Wait Campaign,”<sup>21</sup> which focuses on encouraging teens to wait until they are adults before using marijuana.

The city and county of Denver, Colorado, launched a campaign in 2016 called “The High Costs”<sup>22</sup> aimed at educating the city’s and county’s youth about the risks of under-age marijuana use.

Oregon’s “Stay True to You”<sup>23</sup> campaign, sponsored by the Oregon Health Authority, targets youth ages 12 to 20. It uses social media and a series of compelling videos based on school surveys conducted every two years to talk about youth attitudes and experiences with marijuana and how to make healthy decisions.

Early evaluations in Colorado and Oregon have shown encouraging results about the impact of their information campaigns, but there are still questions about whether all audiences are being reached. Colorado’s “Good to Know” program, targeting adults 21 and older, was shown to raise awareness and lower the chances of first-time use. It did not, however, have significant impact on those who were already marijuana consumers. The “High Costs” campaign (referenced above),

targeting those under 21, has been criticized for using scare tactics rather than focusing on healthy decisions and harm reduction. Students for Sensible Drug Policy (SSDP),<sup>24</sup> an international, student-run nonprofit action group offers this advice:

“Any public awareness campaign about drugs needs to educate both people who intend to abstain from drug use and those who intend to engage in drug use. Failing to address the needs of both populations reduces what would be an educational program to prevention propaganda. Programs like D.A.R.E., Just Say No, and Scared Straight all told students to just not do drugs. D.A.R.E., Just Say No, and Scared Straight were ineffective at reducing drug use, and completely failed at preparing young people for a reality where people use drugs. Our ideal drug education informs about ways of reducing harm associated with drug use and the potential consequences associated with using drugs. It contains factual information about the drugs themselves, harm reduction tips, information about routes of administration and dosing, information on poly-substance use and what combinations are least or most harmful, information on the legal status of a drug and the laws around it, and more. Proper drug education also needs to be non-stigmatizing and non-judgmental in its approach.” (Colorado Cannabis Campaigns: What Works, What Doesn’t and What We’d Like to See. February 5, 2018)<sup>25</sup>

## Frequently Asked Questions

**Question:** My district is reporting increased 911 calls for students who have ingested marijuana. Why is this happening?

**Answer:** Edible marijuana products typically contain more potent levels of THC than other forms and students are unaware of this. The effects can be delayed by 30 minutes or more and can cause disorientation, paranoia, and in some cases, loss of consciousness. This means that a student who is given edible marijuana at lunchtime by a friend who brought it from home may feel fine at first, but a class period or two later will be in distress.

**Question:** Are the negative effects of marijuana use on the brain permanent?

**Answer:** Longitudinal studies of negative effects from marijuana use show the most sustained effects in those who are regular (daily) users and who began use during adolescence. Permanent effects have not been shown in occasional users.

**Question:** Is CBD approved by the FDA?

**Answer:** A new drug called Epidiolex, which contains a synthetic form of CBD was approved by the FDA in June 2018.<sup>26</sup> Pharmaceutical companies will likely continue to develop and test similar drugs for FDA approval, thus simplifying questions of legality for schools in the future.

## Resources

### Centers for Disease Control (CDC) Fact Sheets:

Marijuana and Driving: [www.cdc.gov/marijuana/factsheets/driving.htm](http://www.cdc.gov/marijuana/factsheets/driving.htm)

Marijuana and Pregnancy: [www.cdc.gov/marijuana/factsheets/pregnancy.htm](http://www.cdc.gov/marijuana/factsheets/pregnancy.htm)

Marijuana Use and Teens: [www.cdc.gov/marijuana/factsheets/teens.htm](http://www.cdc.gov/marijuana/factsheets/teens.htm)

### National Institute for Drug Abuse (NIDA) Fact Sheets:

For parents: [teens.drugabuse.gov/parents](http://teens.drugabuse.gov/parents)

For teens: [teens.drugabuse.gov/videos](http://teens.drugabuse.gov/videos)

For teachers: [teens.drugabuse.gov/teachers](http://teens.drugabuse.gov/teachers)

Dr. Virginia Adams Simon is an independent education consultant who has more than 18 years of experience in education policy and school reform.

## Endnotes

- 1 CSBA Marijuana Policy Briefs: [www.csba.org/GovernanceAndPolicyResources/ResearchAndPolicyBriefs](http://www.csba.org/GovernanceAndPolicyResources/ResearchAndPolicyBriefs)
- 2 Adult Medical Use of Marijuana Act of 2016: [leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=201720180AB64](http://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB64)
- 3 Compassionate Use Act of 1996: [leginfo.ca.gov/faces/codes\\_displaySection.xhtml?sectionNum=11362.5.&lawCode=HSC](http://leginfo.ca.gov/faces/codes_displaySection.xhtml?sectionNum=11362.5.&lawCode=HSC)
- 4 National Institute on Drug Abuse Definitions: [www.drugabuse.gov/publications/research-reports/marijuana/what-marijuana](http://www.drugabuse.gov/publications/research-reports/marijuana/what-marijuana)
- 5 See the 2014 Federal Farm Bill: [nifa.usda.gov/industrial-hemp](http://nifa.usda.gov/industrial-hemp)
- 6 California Department of Public Health Policy on Industrial Hemp: [www.cdph.ca.gov/Programs/CEH/DFDCS/CDPH%20Document%20Library/FDB/FoodSafetyProgram/HEMP/Web%20template%20for%20FSS%20Rounded%20-%20Final.pdf](http://www.cdph.ca.gov/Programs/CEH/DFDCS/CDPH%20Document%20Library/FDB/FoodSafetyProgram/HEMP/Web%20template%20for%20FSS%20Rounded%20-%20Final.pdf)
- 7 The Science of the Endocannabinoid System: How THC Affects the Brain and Body; Scholastic Education Information for Students: [headsup.scholastic.com/students/endocannabinoid](http://headsup.scholastic.com/students/endocannabinoid)
- 8 Hall, W. & Degenhardt, L. (2007). Prevalence and Correlates of Cannabis Use in Developed and Developing Countries. [www.ncbi.nlm.nih.gov/pubmed/17551355/](http://www.ncbi.nlm.nih.gov/pubmed/17551355/) and Chen, C.Y., Storr, C.L. & Anthony, J.C. (2009) Early on-set Drug Use and Risk for Drug Dependence Problems: [www.ncbi.nlm.nih.gov/pubmed/19022584/](http://www.ncbi.nlm.nih.gov/pubmed/19022584/)
- 9 Volkow, Nora, Baler, Ruben et al. (2014). Adverse Health Effects of Marijuana Use. [www.ncbi.nlm.nih.gov/pmc/articles/PMC4827335/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4827335/)
- 10 It is important to note that marijuana in this definition is recreational and therefore contains higher THC levels.
- 11 Goodwin, Renne, Cheslack-Postava, Keely, et al. (2015). Trends in Cannabis and Cigarette Use Among Parent with Children at Home from 2002 to 2015: [pediatrics.aappublications.org/content/early/2018/05/10/peds.2017-3506](http://pediatrics.aappublications.org/content/early/2018/05/10/peds.2017-3506)
- 12 Holitzki, H., Dowsett, L.E., et al. (2017). Health Effects of Exposure to Second- and Third-Hand marijuana smoke; A Systemic Review: [www.ncbi.nlm.nih.gov/pubmed/29192095](http://www.ncbi.nlm.nih.gov/pubmed/29192095)
- 13 Richardson, K.A., Hester, A.K., Mc Lemore, G.L. (2016). Prenatal Cannabis Exposure- 'The first hit' on the Endocannabinoid System. [www.ncbi.nlm.nih.gov/pubmed/27567698](http://www.ncbi.nlm.nih.gov/pubmed/27567698)
- 14 Wang, X., Dow-Edwards, D. et al. (2004). In Utero Marijuana Exposure Associated with Abnormal Amygdala Dopamine D2 Gene Expression in Human Fetus: [www.ncbi.nlm.nih.gov/pubmed/15601599](http://www.ncbi.nlm.nih.gov/pubmed/15601599)
- 15 Baker, T., Datta, P., et al, (2018). Transfer of Inhaled Cannabis into Human Breast Milk. [www.ncbi.nlm.nih.gov/pubmed/29630019](http://www.ncbi.nlm.nih.gov/pubmed/29630019)
- 16 Volkow, Nora, Baler, Ruben et al. (2014). Adverse Health Effects of Marijuana Use: [www.ncbi.nlm.nih.gov/pmc/articles/PMC4827335/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4827335/)
- 17 CDPH Let's Talk Cannabis Campaign: [www.cdph.ca.gov/Programs/DO/letstalkcannabis/Pages/LetsTalkCannabis.aspx](http://www.cdph.ca.gov/Programs/DO/letstalkcannabis/Pages/LetsTalkCannabis.aspx)
- 18 Butte County Campaign: [www.buttecounty.net/publichealth/Programs/LetsTalkCannabis](http://www.buttecounty.net/publichealth/Programs/LetsTalkCannabis)
- 19 Los Angeles County Campaign: [publichealth.lacounty.gov/sapC/teens/](http://publichealth.lacounty.gov/sapC/teens/)
- 20 Pasadena Campaign: [ww5.cityofpasadena.net/city-manager/2018/05/07/4419/](http://ww5.cityofpasadena.net/city-manager/2018/05/07/4419/)
- 21 Vancouver Campaign: [www.esd112.org/news/vancouver-youth-and-community-leaders-behind-the-420-launch-of-weed-can-wait-campaign/](http://www.esd112.org/news/vancouver-youth-and-community-leaders-behind-the-420-launch-of-weed-can-wait-campaign/)
- 22 Denver Campaign: [www.thehighcosts.com](http://www.thehighcosts.com)
- 23 Oregon Campaign: [www.staytruetoou.org/#home](http://www.staytruetoou.org/#home)
- 24 Students for Sensible Drug Policy: [ssdp.org/about/](http://ssdp.org/about/)
- 25 Students for Sensible Drug Policy Campaign Reviews: [ssdp.org/blog/colorado-cannabis-education-campaigns-works-doesnt-wed-like-see/](http://ssdp.org/blog/colorado-cannabis-education-campaigns-works-doesnt-wed-like-see/)
- 26 FDA News Release: [www.fda.gov/newsevents/newsroom/press-announcements/ucm611046.htm](http://www.fda.gov/newsevents/newsroom/press-announcements/ucm611046.htm)





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# Governance Brief

## The School Board Role in Creating the Conditions for Student Achievement: A Review of the Research (Summary)

by Mary Briggs and Manuel Buenrostro

### Introduction

This brief sheds light on how boards can carry out the essential responsibility of governance to help their school districts and county offices of education improve learning outcomes for the students in their communities. It is a summary of a CSBA report *The School Board Role in Creating the Conditions for Student Achievement: A Review of the Research*.

In studies of district improvement, research has focused on central offices and schools, paying limited attention to the role of school district boards, and virtually none to county boards. To address these oversights, the first sections of this brief focus on how school districts impact student outcomes, identifying six factors that support district improvement and noting implications for how school boards can affect each area. The final two sections explore research that focuses explicitly on school board professional development and roles and relationships. While research on the county board role is virtually non-existent, many of the research conclusions on the impact of school boards on student outcomes are also relevant for county boards.

### The Six Factors Supporting District Improvement

The full report explores the six interdependent factors that appeared most often in our extensive review of the literature on districtwide improvement in student achievement. We paid particular attention to what scholars had to say about school districts that have made or are making progress toward improving outcomes for historically underserved student groups. The six factors include:

#### This brief will answer the following questions:

- » What are six research-based factors that support district improvement?
- » How can board members support each of these factors?
- » What does the research say about board member professional development?
- » What does the research say about board member roles and relationships?

1. Setting a vision and goals with a primary focus on student achievement, and aligning resources to realize those goals.
2. Establishing and maintaining a coherent, districtwide system that still offers a degree of autonomy at the school site.
3. Using data to inform and support continuous improvement, especially for student achievement.
4. Creating a district culture that supports student achievement, including establishing strong community partnerships.
5. Investing in staff capacity at all levels.
6. Maintaining stable and effective leadership while ensuring a shared vision and responsibility for meeting goals that can withstand leadership transitions.

## Factor 1: Setting a Vision and Goals

Multiple studies have found a positive relationship between student achievement and boards that share a common vision and goals.<sup>1,2</sup> With this strong foundation, distractions can be reduced, nonessential initiatives can be filtered out, and people are more likely to work together effectively on a common agenda.<sup>3,4</sup> In setting a vision and aligning goals that improve student outcomes, boards should consider the following factors:

**Focus on learning outcomes.** Research has shown that goals focused on learning outcomes have the greatest impact on student achievement.<sup>5,6,7</sup> In a district comparison study, the boards from low-achieving districts reported focusing primarily on keeping costs low, while boards in high-achieving districts identified academic achievement as their main responsibility.<sup>8</sup> Studies also suggest that boards in high-achieving districts spend more time discussing student achievement and policy development than discussing administrative details.<sup>9,10</sup>

**Engage stakeholders in the process.** By gathering and sharing input from a range of stakeholders in a timely and effective manner, districts can encourage buy-in and establish a vision and goals that reflect the priorities of the whole system. This is supported by a study indicating a statistically significant correlation between the inclusion of relevant stakeholders in the goal-setting process and student achievement.<sup>11</sup>

**Place equity front and center.** Research indicates that boards in high-performing districts and those that close achievement gaps demonstrate a shared commitment to ensuring a high-quality education for every student,<sup>12</sup> set goals and policies that foster learning for all students, and develop goals for faster growth for high-need students (coupled with equitable investments).

**Communicate.** Researchers report that successful boards use the district vision as the basis for policy initiatives and monitoring. They also engage in a wide range of activities throughout the district, allowing them to communicate and reinforce the vision and goals more widely.<sup>13</sup>

**Align resources.** Research describes a positive relationship between student achievement and leaders' use of resources to support goals,<sup>14</sup> including an achievement boost in urban districts that funneled extra resources to the lowest-performing schools.<sup>15</sup>

## Factor 2: A Coherent System That Also Provides Site-Level Flexibility

School and county boards are tasked with governance but not administration. They can support coherence by monitoring how the different components of the system interact in service of key goals, while leaving the details of strategy implementation and management to district staff. In establishing a coherent system, board members should consider the following:

**Everything is connected.** A focus on systems thinking recognizes that what is done in one part of the system affects every other part of the system. At the same time, changes in a single area are not likely to lead to system-wide change. A partial list of the systems operating within a district includes hiring and teacher assignment practices, evaluation systems, professional development, facilities use, scheduling, and instructional materials adoption processes. In a coherent system, these components complement rather than compete with one another.

**"Islands of Excellence" are not enough.** Having individual high-achieving schools, grade levels, or classrooms within a district while other students are left behind is not enough. School districts should be organized to support a coherent system of services that facilitates excellent teaching and learning in every school and classroom.<sup>16</sup>

### What is Coherence?

Recent education research has argued for district coherence, but what does that mean? Researchers who study coherence emphasize that it extends beyond well-aligned structures. Coherence is a dynamic process that involves schools and central offices working together to continually negotiate the needs of each school within the broader demands placed on the district.<sup>17</sup> In other words, the ongoing work within the district is coordinated to support a district's progress toward its goals.

**Ideas for new initiatives should be carefully filtered.** Governing boards can guide administrators at both the central office and school level to filter new ideas so that "initiative fatigue" does not occur. As education consultants and authors Michael Fullan and Joanne Quinn noted, the problem is "the presence of too many [goals] that are ad hoc, unconnected, and ever changing."<sup>18</sup> Likewise, policy researcher and expert Jonathan Supovitz advises leaders such as board members to use their vision and goals to

exercise discipline in considering whether new initiatives that are not expressly mandated are consistent with district goals—or divert critical resources, including time and energy.<sup>19</sup>

**Centralization versus decentralization is not the issue.** Many district reform efforts focus on increased or decreased centralization at the district level. However, research has shown that it is districts’ ability to effectively implement their selected strategies, not their level of centralization that is most important to district improvement.<sup>20</sup>

**District authority and site-level flexibility should be balanced.** Research on district improvement consistently points to an approach that balances district authority with site-level flexibility.<sup>21,22,23</sup> The district’s role is to establish a shared vision and goals, and measure progress. How schools meet goals, however, should allow for professional judgment and reflect the school context.<sup>24,25,26</sup> Research supports the need for district goals that are non-negotiable and strongly emphasized, while allowing school leaders—including teachers—to determine the approach to achieve those goals.<sup>27</sup>

### *Factor 3: Using Data to Inform and Support Continuous Improvement*

Leaders at both the district and school level need reliable data to inform decisions about how to improve student outcomes and facilitate continuous improvement. Effective use of data depends on the capacity of users to interpret and act on it. To support continuous improvement, board members should consider how data is used by district leadership and within each school—particularly to advance equity.

**District leadership for data use.** A culture in which data informs decisions starts with district leaders, including the board, superintendent, and central office staff. District leadership can support continuous improvement by using data at the central office to monitor how fiscal and human resource investments contribute to meeting goals. In a study of how Sanger Unified School District achieved significant gains in the past decade, researchers identified decisions grounded in evidence as a key principle for improvement—this included looking at different types of data to test and improve approaches, as well as to gain community support.<sup>28</sup>

**School use of data.** District leaders are key to ensuring that schools have the appropriate infrastructure, guidance, and training to use data effectively, and that they understand the importance of effective use of data. A nationally representative survey of district leaders found nearly all superintendents and three fourths of board members

regarded the frequent use of assessment data as an important instructional strategy.<sup>29</sup> The most common approaches to building school capacity for data use according to a nationwide survey are professional development, providing staff for data system setup and support, and developing tools for generating and acting on data.<sup>30</sup>

Given that teachers are the most important in-school factor contributing to student achievement, teachers’ use of data is critical.<sup>31,32</sup> School boards can make it a priority for the district to make relevant and timely data available to teachers, along with providing them the flexibility to adapt lessons and curriculum in response to student, classroom, and school learning needs.<sup>33</sup> Principals also influence how teachers use data by implementing data examination activities, establishing a climate in which data is used as a resource for learning and improving practice, and setting an example through their own use of data to inform site-level decisions.

**Data to support equity.** Data analysis with a focus on equity can help district leaders identify opportunity and achievement gaps, and determine which resources can be used to close these gaps. Data can also help district leaders communicate with parents and other stakeholders about how and why resources are being used to address challenges. Using data for equity at the classroom level means looking at multiple factors to address individual student needs.<sup>34</sup> Research has shown that teachers in schools that are narrowing achievement gaps are more likely to receive professional development on understanding data, linking it to instructional strategies, and applying what they learn to address the instructional needs of low-achieving students.<sup>35</sup>

### *Factor 4: Culture of Support*

District culture consists of the predominant norms, values, and attitudes that drive the behavior of the board, administrators, educators, other personnel, students, and families.<sup>36</sup> Boards can model and communicate norms and values for professional behavior that foster effective teaching and learning. Moreover, boards can work with central office administrators to develop policies that support collaboration and professional learning. In our review of the research, the following themes are essential to a culture that contributes to student achievement:

**Trust is important.** Successful implementation of strategies cannot happen without trust—including trust between principals and their staff; peers, parents and schools; and the central office and schools.<sup>37,38,39,40</sup> Board members can support a culture of trust by engaging with the community, modeling positive and professional relationships,

making decisions with transparency, and fostering mutual accountability.

**Attitudes and beliefs shape culture.** District culture is influenced by the attitudes and beliefs of staff at all levels—three beliefs that shape a positive culture and appear throughout the research are highlighted below:

1. **All students can learn.** Boards in high-achieving districts report significantly more positive opinions about their students' potential than in low-achieving districts with similar students.<sup>41</sup>
2. **Teachers and schools make a difference.** Effective boards—those in districts that successfully implement policies that lead to improved student achievement—believe in their districts' collective ability to improve student achievement, while less-effective boards are more likely to blame external factors and students.<sup>42</sup>
3. **Everyone is responsible for student learning.** Shared responsibility ensures that staff at all levels support each other to improve student outcomes.<sup>43</sup> In successful districts, educators: 1) take responsibility for their contributions to improving teaching and 2) receive support from boards, superintendents, central office staff, principals, and others.<sup>44</sup>

**Community engagement is essential for success.** Research identifies strong community connections as a characteristic of high-achieving districts.<sup>45</sup> Therefore, leaders can enhance the success of district initiatives by investing in meaningful community engagement.

**Partnerships enhance impact.** One of the frequently cited characteristics of effective boards is a positive relationship with external agencies, local and state government, and the general public.<sup>46,47</sup> Partnerships with external agencies can often bring additional resources and capacity to schools.<sup>48</sup>

### *Factor 5: Investing in Capacity at All Levels*

Districts and schools need qualified staff to deliver educational programs that meet the learning needs of all students. Furthermore, as districts seek to improve student achievement through new initiatives, outcomes depend on highly skilled staff, including district leaders and school personnel.

**District leaders play an important role in developing staff capacity.** Evidence indicates that districts that invest in professional learning for teachers, school leaders, and district leaders can achieve improvements in student outcomes. Board members and superintendents understand

this: They identify professional learning as the most important approach to improving student learning.<sup>49</sup>

Research indicates that boards that are successful at implementing and sustaining initiatives invest in extensive professional development, even in tough financial times, while boards that dramatically cut professional development have proven less successful in seeing their initiatives to completion.<sup>50</sup> In addition, researchers have found that training for board members can strengthen their beliefs that adults can have a positive impact on student achievement and that professional learning is essential to improving teaching and learning.<sup>51</sup>

**School staff capacity is critical to site coherence and autonomy.** The capacity of school staff is essential to maintaining a balance between districtwide coherence and site autonomy. While site autonomy is part of an effective system, staff—teachers and principals, in particular—need appropriate training and support to meet goals established by district leaders.

- » **Teacher capacity.** Research has shown that teachers are the most important in-school contributors to a range of student outcomes<sup>52</sup> and that the quality of teachers' subject matter knowledge and pedagogical understanding have an impact on student learning.<sup>53</sup> Teacher professional development on the implementation of a rigorous curriculum, differentiation for diverse students, using assessment data, and making time for collaboration are all associated with improvements in teaching and learning.<sup>54</sup> Effectively structured collaboration, in particular, can help teachers improve their instructional skills and improve student academic achievement.<sup>55</sup>
- » **Principal capacity.** Principals have a substantial impact on the support provided to school staff and in how instructional time is invested, with research indicating positive connections between student learning and specific principal behaviors; teachers' understanding of what to do to improve teaching and learning;<sup>56</sup> and the conditions that attract and retain skilled teachers.<sup>57,58,59,60</sup>

### *Factor 6: Planning for Leadership Turnover*

Since ambitious reforms operate on timelines that often outlast board terms and superintendent tenure, experts observe that districts should explicitly plan for evolving teams and implement systems to uphold major initiatives through transitions.<sup>61</sup>

**Boards can support successful transitions.** Strong support throughout the system makes longevity of initiatives more likely. As previously mentioned, board members play a key role in community engagement, establishing partnerships, and creating a shared vision and goals.<sup>62</sup> Together these form a foundation that helps boards incorporate new leaders into ongoing improvement efforts.

- » **Superintendents.** A shared vision and goals guide boards as they fulfill one of their major responsibilities—hiring and supervising a superintendent. The board and community can set the expectation for a superintendent to maintain district initiatives to achieve a district’s vision and goals.
- » **New board members.** Boards can ensure a careful onboarding process that shortens the learning curve for new members and fosters ongoing productive collaboration. This training can focus on key areas, such as the appropriate board role.<sup>63</sup> Boards can also schedule study sessions that address the vision and goals established by the board, and a summary of prior work and progress.

**Superintendent turnover.** Superintendents are crucial to implementing board priorities, yet turnover can challenge the sustainability of initiatives. Understanding why superintendents leave can help boards address recruitment and retention effectively.

There is a common misconception that superintendents often leave their districts due to poor relations with their boards—research in California found this to be one of the less common reasons for superintendent attrition. Retirement was the most common reason and moving to a district that was larger or that offered better compensation was a close second. While poor board relations were a more prevalent impetus for turnover decisions in large and low-income districts in both California and nationwide, most board members and superintendents in the California study said that their districts had high-functioning boards and positive board–superintendent relationships.<sup>64,65</sup>

**Board member turnover.** Though more predictable given the nature of election cycles, very little research has addressed factors related to board turnover. However, there is some evidence of the impact of board member turnover on student achievement. For example, a study of board turnover in Washington state found a statistically significant relationship between increasing board turnover and declining achievement scores, especially in cases in which turnover was motivated by personal circumstances as opposed to electoral defeat.<sup>66</sup>

## The Impact of Board Relationships and Roles

Districts and county offices of education are complex organizations. To be effective, they require clearly defined responsibilities and positive relationships between leadership and staff. In these organizations, board members and the superintendent form the leadership team and entrust central office and school staff with carrying out their shared vision. Understanding the parameters of each district role is central to maintaining effective working relationships.

### CSBA Outlines Five Board Responsibilities:

1. Set direction for the district or county office of education.
2. Establish structure through policy.
3. Provide support for implementation.
4. Ensure accountability through oversight and monitoring.
5. Act as community leaders.

These functions are so fundamental to a system’s accountability to the public that only an elected board can fulfill them.

Research identifies the following board roles as having a positive impact on student outcomes:

**Establishing a shared vision and goals.** As stated earlier, evidence points to boards and district leaders working together to establish and share common goals as a condition for district success.<sup>67</sup> Research also indicates that when the board and superintendent share common goals, principals feel more supported in their work.<sup>68</sup>

**Working collaboratively.** The importance of collaboration extends beyond the board and superintendent—it includes collaboration between the board and other district staff, as well as among individual board members. A National School Boards Association report found that “effective boards lead as a united team, with the superintendent, each from their respective roles, with strong collaboration and mutual trust.”<sup>69</sup> This is supported by observations of over 100 board meetings, where researchers found that board members in low-performing districts focused on advancing their own agendas more often than those in high-performing districts.<sup>70</sup>

**Engaging the community.** Positive community relations are essential to sustainable improvement, and research supports that board members have an important role in fostering this relationship.<sup>71</sup> There is also evidence that board members from high-performing districts engage more with government and community agencies.<sup>72</sup>

**Empowering staff.** Understanding the role of boards as vision-setters and policymakers, and of superintendents and other staff as implementers, is important. This is supported by the Council of the Great City Schools, which identified the board’s ability to focus on “policy level decisions” and not “the day-to-day operations” as a precondition for success.<sup>73</sup> Successful boards set higher expectations for superintendents, but they also empower their superintendents as leaders that contribute guidance and expertise.<sup>74</sup>

## Training and Professional Learning for Board Members

Professional learning for board members can enhance their ability to support the factors associated with improving student achievement. Research on effective boards and district leadership supports the conclusion that professional learning is essential.<sup>75</sup> Evidence suggests that boards benefit from training in the following areas:

1. **The basics of the job.** Bringing board members up to speed on policies and regulations that help them meet their fiduciary responsibilities.
2. **Effective governance practices.** Ensuring that meetings are run efficiently and that effective protocols are in place, so that meetings can focus on student achievement.<sup>76</sup>
3. **The role of the board and that of the superintendent and staff.** Ensuring that the board supports district efforts effectively and focuses on working collaboratively to set policies and direction.<sup>77</sup>
4. **Ways to improve student outcomes and close achievement gaps.** Ensuring that board members are champions of student learning and equity in how they set goals and policies, and that they make investments that support effective teaching and learning.
5. **Community engagement and public leadership.** Ensuring that board members can communicate effectively with and advocate for the needs of their schools and communities.

As champions of public education, board members can model the value of lifelong learning for their county offices of education, school districts, schools, and communities. In addition to the professional development topics covered in this section, board training on each of the six factors linked to school district improvement explored in this report can also support student achievement. For this reason, boards may wish to incorporate periodic self-assessments to identify areas that warrant additional attention.

With the changing education landscape in California, there will always be a need for board professional development about evolving standards, assessments, regulations, and legislation that can affect the operations of their school districts and county offices of education. Informed board members are better stewards of public education—more effectively communicating with the community about the importance of public education and the challenges and opportunities faced by public schools.

CSBA is strongly committed to providing quality professional learning, research, and information on important topics, and to ensuring that board members continue to advocate for equity and closing achievement gaps. As one of the 26 states where board training is not currently mandated,<sup>78</sup> we will continue to fill the important role of ensuring that board members can be among the most effective supporters of public education.

## Conclusion

This brief is a summary of the CSBA report *The School Board Role in Creating the Conditions for Student Achievement*. For more about the research that serves as the foundation for each of the six factors that support student achievement, an annotated bibliography of board-specific research, and a detailed list of professional development opportunities for board members, the full report is available at <http://bit.ly/2ilfZb3>.

## Endnotes

- 1 Robinson, V. M. J., Lloyd, C. A., & Rowe, K. J. (2008). The impact of leadership on student outcomes: An analysis of the differential effects of leadership types. *Education Administration Quarterly*, 44(5), 635-674. Retrieved from <http://bit.ly/1xvoAsC9>
- 2 Waters, J. T., & Marzano R. J. (2006). *School district leadership that works: The effects of superintendent leadership on student achievement*. Denver, CO: Mid-Continent Research for Education and Learning. Retrieved from <http://bit.ly/2zgsfR4>
- 3 Fullan, M., & Quinn, J. (2016). *Coherence: The right drivers in action for schools, districts, and systems*. Thousand Oaks, CA: Corwin.
- 4 Supovitz, J. A. (2006). *The case for district-based reform: Leading, building, and sustaining school improvement*. Cambridge, MA: Harvard University Press.
- 5 Devarics, C., & O'Brien, E. (2011). *Eight characteristics of effective school boards: Full report*. Alexandria, VA: Center for Public Education. Retrieved from <http://bit.ly/1k86k7c>
- 6 Southern Regional Education Board. (2010). *The three essentials: Improving schools requires district vision, district and state support, and principal leadership*. Atlanta, GA. Retrieved from <http://bit.ly/2pT4xb5>
- 7 Black, S. (2008). The keys to board excellence. *American School Board Journal*, 195(2), 34–35. Retrieved from <http://bit.ly/2pW4lcc>
- 8 Delagardelle, M. L. (2008). The lighthouse inquiry: Examining the role of school board leadership in the improvement of student achievement. In T. L. Alsbury (Ed.), *The future of school board governance: Relevance and revelation* (pp. 191–223). Lanham, MD: Rowman & Littlefield Education.
- 9 Alsbury, T. L. (2008). School board member and superintendent turnover and the influence on student achievement: An application of the dissatisfaction theory. *Leadership and Policy in Schools*, 7(2), 202–229. Available at <http://bit.ly/2zg4cSq>
- 10 Land, D. (2002). Local school boards under review: Their role and effectiveness in relation to students' academic achievement. *Review of Educational Research*, 72(2), 229–278.
- 11 See endnote 2
- 12 See endnote 8
- 13 LaRocque, L., & Coleman, P. (1993). The politics of excellence: Trustee leadership and school district ethos. *The Alberta Journal of Educational Research*, 39(4), 449-475.
- 14 See endnote 2
- 15 Snipes, J., Doolittle, F., & Herlihy, C. (2002). *Foundations for success: Case studies of how urban school systems improve student achievement*. Washington, DC: Council of the Great City Schools. Retrieved from <http://bit.ly/2pTm6lB>
- 16 Johnson, S. M., Marietta, G., Higgins, M. C., Mapp, K. L., & Grossman, A. (2015). *Achieving coherence in district improvement: Managing the relationship between the central office and schools*. Cambridge, MA: Harvard Education Press.
- 17 See endnote 3
- 18 See endnote 3
- 19 See endnote 4
- 20 See endnote 16
- 21 David, J. L., & Talbert, J. E. (2013). *Turning around a high-poverty district: Learning from Sanger*. San Francisco, CA: S.H. Cowell Foundation.
- 22 Dailey, D., Fleischman, S., Gil, L., Holtzman, D., O'Day, J. A., & Vosmer, C. (2005). *Toward more effective school districts: A review of the knowledge base*. Washington, DC: American Institutes for Research. Retrieved from <http://bit.ly/2pW0Y59>
- 23 Shannon, G. S., & Bylsma, P. (2004). *Characteristics of improved school districts: Themes from research*. Olympia, WA: Office of Superintendent of Public Instruction. Retrieved from <http://bit.ly/2pTaVQr>
- 24 Finnigan, K. S., & Daly, A. J. (2012). Mind the gap: Organizational learning and improvement in an underperforming urban system. *American Journal of Education*, 119(1), 41–71.
- 25 Chrispeels, J. H., Burke, P. H., Johnson, P., & Daly, A. J. (2008). Aligning mental models of district and school leadership teams for reform coherence. *Education and Urban Society*, 40(6), 730–750.
- 26 O'Day, J. A. (2002). Complexity, accountability, and school improvement. *Harvard Educational Review*, 72(3), 293–330.
- 27 See endnote 2
- 28 See endnote 21
- 29 Hess, F. M., & Meeks, O. (2010). *School boards circa 2010: Governance in the accountability era*. The National School Boards Association (NSBA), The Thomas B. Fordham Institute, and The Iowa School Boards Foundation. Retrieved from <http://bit.ly/2pXWfh0>
- 30 U.S. Department of Education, Office of Planning, Evaluation and Policy Development. (2010). *Use of education data at the local level from accountability to instructional improvement*. Washington, DC. Retrieved from <http://bit.ly/2qSdRdF>
- 31 Chetty, R., Friedman, J. N., & Rockoff, J. E. (2011). *The long-term impacts of teachers: Teacher value-added and student outcomes in adulthood*. National Bureau of Economic Research. Retrieved from <http://bit.ly/2yvejUg>
- 32 Hanushek, E. A. (2002). Teacher quality. In L. T. Izumi & W. M. Evers (Eds.), *Teacher Quality*. Stanford, CA: Hoover Press. Retrieved from <http://stanford.io/2pWfc5L>
- 33 Young, V. M. (2008). Supporting teachers' use of data: The role of organization and policy. In E. B. Mandinach, & M. Honey (Eds.), *Data-Driven School Improvement: Linking data and learning* (pp. 103-104). New York, NY: Teachers College Press.
- 34 Wayman, J. C., Conoly, K., Gasko, J., & Strinfield, S. Supporting equity inquiry with student data computer systems. In E. B. Mandinach, & M. Honey (Eds.), *Data-driven school improvement: Linking data and learning* (p. 173). New York, NY: Teachers College Press.
- 35 Symonds, K. W. (2004). *After the test: Closing the achievement gaps with data*. Learning Point Associates and Bay Area School Reform Collaborative. Retrieved from <http://bit.ly/2goGnUz>



- 36 See endnote 16
- 37 Bannister, N. A. (2015). Reframing practice: Teacher learning through interactions in a collaborative group. *Journal of the Learning Sciences*, 24(3), 347–372.
- 38 Marsh, J. A. (2012). Interventions promoting educators' use of data: Research insights and gaps. *Teachers College Record*, 14(11), 1–48.
- 39 Johnson, P. E., & Chrispeels, J. H. (2010). Linking the central office and its schools for reform. *Educational Administration Quarterly*, 46(5), 738–775. Retrieved from <http://bit.ly/2gMDauP>
- 40 Young, V. M., & Kim, D. H. (2010). Using assessments for instructional improvement: A literature review. *Education Policy Analysis Archives*, 18(19), 1–40. Retrieved from <http://bit.ly/2A6yXt9>
- 41 See endnote 8
- 42 See endnote 8
- 43 See endnote 8
- 44 See endnote 22
- 45 See endnotes 8, 13, and 15
- 46 Plough, B. (2014). School board governance and student achievement: School board members' perceptions of their behaviors and beliefs. *Educational Leadership and Administration: Teaching and Professional Development*, 25, 41-53. Retrieved from <http://bit.ly/2yRNOeK>
- 47 See endnotes 10 and 22
- 48 See endnote 4
- 49 See endnote 29
- 50 See endnote 46
- 51 See endnote 8
- 52 See endnotes 31 and 32
- 53 Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives*, 8(1). Retrieved from <http://bit.ly/2yot8dJ>
- 54 Murphy, J. (2010). *The educator's handbook for understanding and closing achievement gaps*. Thousand Oaks, CA: Corwin Press.
- 55 Ronfeldt, M., Farmer, S. O., McQueen, K., & Grissom, J. A. (2015). Teacher collaboration in instructional teams and student achievement. *American Education Research Journal*, 52(3).
- 56 See endnote 2
- 57 Scholastic and the Bill & Melinda Gates Foundation. (2010). *Primary sources: America's teachers on America's schools*. Retrieved from <http://bit.ly/2yukQ1a>
- 58 Hirsch, E., Sioberg, A., & Germuth, A. (2010). *TELL Maryland: Listening to educators to create successful schools*. New Teacher Center at UC Santa Cruz. Retrieved from <http://bit.ly/2qJppnf>
- 59 Ladd, H. (2009). *Teachers' perceptions of their working conditions: How predictive of policy-relevant outcomes?* Washington, DC: Center for Analysis of Longitudinal Data in Education Research (CALDER). Retrieved from <http://urban.is/2zerJ7l>
- 60 Hirsch, E., Freitas, C., Church, K., & Villar, A. (2008). *Massachusetts teaching, learning and leading survey: Creating school conditions where teachers stay and students thrive*. New Teacher Center at UC Santa Cruz. Retrieved from <http://bit.ly/2pcNWky>
- 61 McAdams, D. R. (2006). *What school boards can do: Reform governance for urban schools*. New York, NY: Teachers College Press.
- 62 See endnotes 4 and 61
- 63 Hanover Research. (2014). *Effective board and superintendent collaboration*. Washington, DC. Retrieved from <http://bit.ly/2pXE5w1>
- 64 Council of the Great City Schools. (2014). *Urban indicator: Urban school superintendents: Characteristics, tenure, and salary: Eighth survey and report*. Washington, DC. Retrieved from <http://bit.ly/2pozgPi>
- 65 Grissom, J. A., & Andersen, S. (2012). Why superintendents turn over. *American Educational Research Journal*, 49(6), 1146–1180.
- 66 See endnote 9
- 67 See endnotes 2 and 15
- 68 See endnote 6
- 69 See endnote 5
- 70 Lee, D. E., & Eadens, D. W. (2012). The problem: Low-achieving districts and low-performing boards. *International Journal of Education Policy & Leadership*, 9(3).
- 71 See endnotes 8 and 15
- 72 See endnote 46
- 73 See endnote 15
- 74 See endnote 13
- 75 See endnote 8
- 76 See endnotes 46 and 70
- 77 See endnotes 64 and 65
- 78 See endnote 9

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# Governance Brief

## Seize the Data: Using Chronic Absence Data to Boost Achievement

A joint publication of CSBA and Attendance Works

For the first time in California, data is available that can help districts and schools better understand the academic impact for students of missing too much school. As a school board member, awareness of the scale and concentration of chronic absences in your district and schools is essential to implementing effective strategies to improve overall achievement and close opportunity gaps. Chronic absence data available through Dataquest on the California Department of Education (CDE) website and through the chronic absence story map from the University of California, Davis, can help trustees determine to what extent students might be struggling simply because they are not in class.

### Examine Your School or District's Chronic Absence Data

DataQuest makes educational data publicly available. You can use this interactive data portal to find the chronic absence rates for schools, districts, and student populations in your community. Attendance Works has created guidance on accessing and analyzing chronic absence data from DataQuest, found [here](#).

Use this UC Davis-created [Data Story Map](#) to see maps showing chronic absence rates in California schools, and the prevalence of schools with high levels of chronic absence by county and region.

### What is chronic absence and why does it matter?

Chronic absence, defined in California as missing 10 percent or more of school days for any reason,<sup>1</sup> is an early warning sign of academic risk for students from pre-school through high school. Chronic absence is different

### In this brief you will find:

- » **A definition of chronic absence and information about why it is important**
- » **Barriers to student attendance**
- » **How to access chronic absence data for your district and schools**
- » **How to use the data to prevent chronic absence**

from truancy (unexcused absences) in that it includes both excused and unexcused absences.<sup>2</sup> Chronic absence has an especially adverse impact on students living in poverty. They are more likely to face attendance barriers at an earlier age and lack access to resources to make up for lost instructional time.

High levels of chronic absence in a school are a red flag signaling that barriers to daily attendance may exist at home, in the community, within the school, or a combination of these factors. Such absenteeism is an indicator that additional support is needed from the district, other public agencies, and nonprofits to address these barriers. Even moderate levels of chronic absence can signal that schools should look into what supports are necessary to prevent escalating absence issues. When many students in a school have poor attendance rates, this can serve as an early warning sign that efforts to engage and meet the needs of students and families are not succeeding.

The good news is that chronic absence can be turned around, especially when schools, students, families, caregivers, public agencies, and other community partners take a data-driven approach to comprehensive support, starting with prevention and early intervention.

## How can chronic absence data help?

Chronic absence data is an essential tool for boosting student success. Such data bolsters existing efforts by providing insights on student achievement and what might be needed to achieve more equitable student outcomes, especially for the most vulnerable students.

Chronic absence data sheds light on which schools need support for increasing attendance. It also informs school districts' Local Control and Accountability Plan (LCAP) goals to improve attendance and allocate resources to meet those goals. Further, districts, schools, and communities are now held accountable for chronic absence through the federal Every Student Succeeds Act (ESSA) and California's Local Control Funding Formula (LCFF) legislation and are required to make this information transparent.

## When did chronic absence data become easily available?

When the Every Student Succeeds Act became law in December 2015, chronic absence data became a required reporting element. The CDE began including chronic absence statistics in the data publicly available through DataQuest in December 2017 after collecting it for the first time in Spring 2017. Previously, California only collected data on truancy (unexcused absences). Relying on truancy data, however, only offers a partial picture and can overlook a large number of students, especially those in the early grades, who are academically at-risk because they have missed instruction due to an accumulation of excused absences.

## Analyzing school level chronic absence

Chronic absence data offers invaluable insights into what is needed improve poor attendance and boost achievement. Attendance Works identifies four major causes of chronic absence: barriers to attendance, negative school experiences, lack of engagement, and misconceptions (see table 1).

## Chronic Absence in California

Drawn from DataQuest, these facts from the 2016–17 academic year paint a picture of the scale of chronic absence and the student populations most affected in terms of percentages and overall numbers.

- » One in 10 California students (an unduplicated count of 694,030) is chronically absent.
- » The highest levels of chronic absence are found in kindergarten (14%) and high school (15.4%).
- » Our most vulnerable students—foster youth and homeless youth—are more than twice as likely as the statewide average to be chronically absent. One in four foster youth—25.1% or 13,879—and 21.2% or 252,525 homeless youth are chronically absent.
- » Other student populations of concern include socioeconomically disadvantaged youth (13.5% or 529,250) and students with disabilities (17.7% or 136,556).
- » Also disproportionately affected are American Indian/Alaska Native (20.9% or 7,124), African American (18.8% or 69,566) and Pacific Islander (15.5% or 4,724).

## Conclusion

High levels of chronic absence in schools are important indicators that districts should invest in analyzing its causes, reallocate district personnel and resources where they are most needed, and enlist the expertise and help of public agencies and other community partners to identify and remedy barriers to attendance.

Table 1: Four major causes of chronic absence			
Barriers to attendance	Negative School Experiences	Lack of Engagement	Misconceptions
<ul style="list-style-type: none"> <li>» Illness, both chronic and acute</li> <li>» Lack of health, mental health, vision or dental care</li> <li>» Trauma</li> <li>» Unsafe path to/from school</li> <li>» Poor transportation</li> <li>» Frequent moves or school changes</li> <li>» Involvement with child welfare or juvenile justice systems</li> </ul>	<ul style="list-style-type: none"> <li>» Academic or social challenges</li> <li>» Bullying</li> <li>» Suspensions and expulsions</li> <li>» Negative attitudes of parents due to their own school experience</li> <li>» Undiagnosed disability</li> <li>» Lack of appropriate accommodations for disability</li> </ul>	<ul style="list-style-type: none"> <li>» Lack of culturally relevant, engaging instruction</li> <li>» No meaningful relationships with adults in school</li> <li>» Stronger ties with peers out of school than in school</li> <li>» Unwelcoming school climate</li> <li>» Failure to earn credits/no future plans</li> <li>» Many teacher absences or long-term substitutes</li> </ul>	<ul style="list-style-type: none"> <li>» Absences are only a problem if they are unexcused</li> <li>» Missing two days per month does not affect learning</li> <li>» Sporadic absences are not a problem</li> <li>» Attendance only matters in the older grades</li> </ul>

### Questions for boards to consider

1. Have you seen chronic absence data for your district and schools?
2. Is chronic absence a moderate or severe problem in particular schools in your district?
3. What strategies and resources are included in your Local Control and Accountability Plan to either prevent future or address current chronic absences?
4. What strategies does the district and the board use to communicate the importance of school attendance to students and their families?

**For more information, please see the full report:**

[Seize the Data Opportunity in California: Using Chronic Absence to Improve Educational Outcomes](#)

Attendance Works is a national initiative dedicated to improving the policy, practice, and research around attendance. Find research, policy analysis and resources at [www.attendanceworks.org](http://www.attendanceworks.org).



# Governance Brief

## The California School Dashboard and Small Districts

by Mary Briggs

### Introduction

The California School Dashboard, also referred to as the Dashboard, reports local educational agency (LEA) performance on multiple indicators and helps the state identify which LEAs need differentiated assistance. The use of the Dashboard as California's primary accountability tool represents a shift from the use of a single "Academic Performance Indicator," which was based primarily on standardized test scores during the No Child Left Behind era. The Dashboard is required by the Local Control Funding Formula (LCFF), the law passed by the Legislature in 2013, which outlines multiple priorities for student outcomes.

The State Board of Education designed the Dashboard to provide information about each LEA's performance and progress toward meeting standards in all of the state priority areas. The Dashboard lists an LEA's or school's most recent available performance in each area, as well as its change in performance over time. These two measures are known respectively as the Status Indicator and the Change Indicator.

The Dashboard was intended not only to inform parents, educators, and other stakeholders about each LEA's current performance and progress, but also to determine which LEAs will receive assistance through the California System of Support (CASOS), which is made up of the California Collaborative for Educational Excellence (CCEE), county offices of education, and the California Department of Education (CDE). Although support is mandatory for LEAs identified based on Dashboard performance, the form and approach to assistance differ from interventions required in past school improvement efforts. Supports are determined in collaboration with the LEA and are intended to

### In this brief, you will find:

- » **How the size of student groups affects the way state indicators are reported in the Dashboard**
- » **Information about the "Safety Net Methodology" for calculating some LEA performance levels for Suspension and Graduation rates**
- » **How missing Dashboard data can impact communication with stakeholders about Dashboard results**
- » **Recommendations for supplementing Dashboard reports with local data**

offer assistance in a broader range of areas than just improving scores on the state's summative assessments.

While two-thirds of California's K-12 students are enrolled in districts with more than 10,000 students, the bulk of the state's districts are small. Approximately 55 percent of California's nearly 1,000 school districts have fewer than 2,500 students. In fact, over 400 districts have an Average Daily Attendance (ADA) of fewer than 1,000 students. These districts face many unique challenges that are often lost in policy discussions, including the impact of the state's accountability reporting mechanism, the Dashboard.

## The Dashboard and Differentiated Assistance

*Differentiated assistance* describes the individually designed support provided to LEAs based on performance issues identified on the Dashboard. All LEAs can receive voluntary assistance—referred to as *Level 1 Support*—from their county office of education or the CCEE, but differentiated assistance—*Level 2 Support*—is mandatory for identified LEAs. As noted previously, what this support entails is determined largely by the LEA. The support provider (usually the LEA’s county office of education) consults with the LEA to develop an improvement plan to meet local needs.

In December 2017, the CDE began using the Dashboard to identify LEAs for assistance through the CASOS. Based on these results, 228 districts were required to receive differentiated assistance. These LEAs have been working with their county offices of education and/or the CCEE to develop strategies for addressing issues raised by their Dashboard performance.

### When Small Districts Have Missing Data in Their Dashboard Reports

Due to small sample sizes, the Dashboard can present challenges in reporting the performance of districts with small student populations. The State Board of Education (SBE) established minimum sample sizes for calculating performance on the state indicators included in the Dashboard. In many small LEAs and schools, enrollment is not sufficient to generate performance levels in one or more of the state indicators.

An LEA with gaps in its Dashboard report due to small sample sizes may need to approach the Dashboard and other data differently, both in terms of communication and decision-making.

#### The state omits or limits some Dashboard reports when sample sizes are very small

When a student group consists of fewer than 11 students, statewide indicator results are not reported because it is difficult to protect student privacy with so few students.

For groups of 11–29 students, the Dashboard lists the status and change data but does not display a color-coded performance level because status and change data are particularly sensitive to individual student performance when sample sizes are small. Even one very high or very low score can pull the average significantly up or down. In these cases, the public can review the numerical data about status and change, but a gray gauge with the words “no performance

### Differentiated Assistance for County Offices of Education

County offices of education will be identified for differentiated assistance beginning with the fall 2018 Dashboard release. However, if a county office of education also serves as the district (e.g., San Francisco Unified School District), the LEA might have been identified for differentiated assistance based on their 2017 Dashboard performance.

### State and Local Indicators

The Dashboard features two types of performance indicators: state and local.

**State Indicators** use data that the state collects from all LEAs and schools. This data includes chronic absenteeism, suspension rates, graduation rates, English learner reclassification, and Smarter Balanced assessment scores for math and English language arts. These indicators are reported using both current status and change over time (when available).

**Local Indicators** are based on data that LEAs collect at the local level and are reported in a more general way: standard met, not met, or not met for two or more years. Local standards include adequate provision of the basics (textbooks, facilities, and correctly assigned teachers), parent engagement, school climate, and implementation of state standards. LEA size has no impact on the reporting of standards being met or not met for local indicators.

color” will be displayed where the colored gauge would appear. In Figure A (below), two student groups were too small to report a performance level. These reports will not be used to determine eligibility for differentiated assistance.

Figure A. No Performance Color Gauge



For the state’s smallest LEAs, it is possible that their Dashboards will display no statewide indicator results or performance levels at all because there are too few students to generate a report. Nonetheless, even these LEAs must report whether local indicators are met or not met.

## The “Safety Net Methodology” for Graduation and Suspension Rates

In most cases, the performance levels displayed on the Dashboard are determined using a 5x5 performance grid (addressed in greater detail in the Appendix of this brief and in CSBA’s November 2017 brief “The California School Dashboard: What Districts Need to Know for 2017–18”).

During the spring 2017 Dashboard pilot, the CDE determined that LEAs and schools with small student populations were overrepresented in the lowest (red) and highest (blue) performance levels because the results of just a few students can significantly impact the Change Indicator. To address this issue, the SBE approved a *Safety Net Methodology* for two of the indicators—Graduation and Suspension Rates.

This method is used when an LEA’s or school’s sample size is large enough to be displayed on the Dashboard but has fewer than 150 students. In these instances, the Change Indicator is reported only as Declined, Maintained, or Increased, and the LEA’s performance level is determined using a 3x5 performance grid. For the 2018 Dashboard, the SBE will apply the *Safety Net Methodology* to student groups as well as schools and LEAs.

### What can districts do when small student groups result in omissions?

When data are omitted from the Dashboard due to sample size, it impacts how much information about LEA or school performance the public can easily access. It also impacts whether the CDE identifies the LEA for differentiated assistance. There are, however, several ways governance teams in small LEAs can assess and communicate student performance:

*Reported or not, governing boards should ensure their LEA is supporting the educational progress of all students and student groups.*

LEAs are responsible for educating all of their students, whether or not they belong to student groups that appear on the Dashboard. Even when data are not included on the Dashboard, LEAs should review locally available student data to identify and address performance gaps.

*Use other data to inform discussions of the state priority areas.*

LEAs can identify sources of data that help them understand how well their programs are serving students, particularly for internal decision-making and Local Control and Accountability Plan (LCAP) development. Such data might include interim assessments designed at the local level (e.g., a reading assessment), course placement data, performance assessments, survey data, or other information the LEA deems relevant.

LEAs have access to individual student and grade-level data on Smarter Balanced assessments for math and English language arts, even when this data is not on their Dashboards. *Internally* reviewing the data can inform decisions about areas of need, but caution must be used to ensure that student privacy is protected. LEAs must remember that:

1. Federal law requires that LEAs and schools protect student privacy, so individual data should *never* be shared publicly.
2. When groups are small enough that students could be identified even without disclosing names (e.g., there are only five third-grade students), that data should not be reported publicly.

The CCEE developed a webinar with suggestions for small LEAs whose Dashboards are missing extensive data. A link is included in the resources section of this brief.

*Fewer displayed performance levels might reduce an LEA’s likelihood of being identified for assistance.*

LEAs with less reported information may not be as likely to be identified for differentiated assistance. These LEAs can still access support, but it is less likely they will be required to participate in the formal process of differentiated assistance.

*Keep in mind how small samples can be impacted by outliers and communicate accordingly.*

Even when a smaller sample size is large enough to be reported, a few outliers can dramatically impact the results. For example, if a small high school district with 50 students and previously stable suspension rates suspends 10 students after a fight at a basketball game, the district’s suspension rate would be 20 percent with no further suspensions that year. This would result in a red rating on the Dashboard. In this case, it would be important for board members to be able to communicate why the suspension rate was so high that year (as well as what steps will be taken to decrease fights).

*Make the most of the narrative box.*

The Dashboard includes a narrative text box on the Summary Page, designed to be an opportunity for LEAs to explain or elaborate on Dashboard results if they choose. In cases where

reports are missing from the Dashboard due to sample size, small LEAs can supplement information on district or county performance, including context for any missing performance levels and discussion of what is being done to monitor and support students in those priority areas. This is an important communication step and provides a level of transparency that builds understanding and trust.

## Questions for Board Members to Consider

When the Dashboard report for a small LEA is impacted by small sample size, board members should ask the following questions.

1. If the Dashboard has any blank sections due to small sample size:
  - a. How will the LEA know how students are doing in those areas?
  - b. Are there other sources of data available locally or on the CDE website that would be useful for monitoring progress on state indicators?
2. How will LEA performance be communicated to key stakeholders such as parents?
3. How can using the narrative component of the Dashboard help the community and the state understand LEA results?
4. Does it appear that a combination of outliers and small sample size led to an inaccurate view of LEA performance on any state indicators?
  - a. If so, how will our LEA explain these results to stakeholders?
  - b. How can the LEA use more reliable data to develop the LCAP?

## Resources

### The California Dashboard: What Boards Need to Know for 2017–18

CSBA's overview of the 2017 Dashboard, including sample questions for board members: [bit.ly/2EhkoER](http://bit.ly/2EhkoER)

### California School Dashboard

Searchable Dashboard results for LEAs and schools: [www.caschooldashboard.org/#/Home](http://www.caschooldashboard.org/#/Home)

### California Dashboard Has a New Look

A one-page flyer that describes the Dashboard 2.0, which will be released in late 2018: [bit.ly/2QYHjMJ](http://bit.ly/2QYHjMJ)

### CAASPP 2018 Website

Searchable LEA and school Smarter Balanced and California Alternative Assessment results for mathematics and English language arts: [caaspp.cde.ca.gov](http://caaspp.cde.ca.gov)

### Small Schools & District Leaders: Build Your Capacity to Make Data-Informed Decisions (Data & Evaluation Module)—Archived March 1, 2018

Webinar with accompanying slides and spreadsheet tool: [ccee-ca.org/training-dashboard-small-schools.asp](http://ccee-ca.org/training-dashboard-small-schools.asp)

### California School Dashboard Technical Guide

The most comprehensive technical overview of the Dashboard, published by the CDE: [bit.ly/2GwGv90](http://bit.ly/2GwGv90)

## Appendix:

### Example of the Dashboard for a Small District and Technical Discussion of the Safety Net Methodology with Examples

CSBA has developed a few examples to further explore how the Dashboard might be impacted for small districts based on their enrollment, including application of the Safety Net Methodology for Graduation and Suspension Rates. The following examples use the 5x5 and 3x5 Performance Grids, which are used to calculate LEA performance for the Dashboard report. The grids are not displayed on the Dashboard report landing page.



**Figure 1.** 2017 Graduation Rate 5x5 Performance Grid

Level	Change: Declined Significantly by greater than 5.0%	Change: Declined by 1.0% to 5.0%	Change: Maintained Declined or increased by less than 1.0%	Change: Increased by 1.0% to less than 5.0%	Change: Increased Significantly by 5.0% or greater
Status: Very High 95.0% or greater	N/A	Blue	Blue	Blue	Blue
Status: High 90.0% to less than 95.0%	Orange	Yellow	Green	Green	Blue
Status: Medium 85.0% to less than 90.0%	Orange	Orange	Yellow	Green	Green
Status: Low 80.0% to less than 85.0%	Red	Orange	Orange	Yellow	Yellow
Status: Very Low Less than 80.0%	Red	Red	Red	Red	Red

Gray colored cell=Not applicable

Source: California School Dashboard Technical Guide, 2017-18 School Year

**Example 1: A District with a Graduating Class of 500 Students and an 87 percent Graduation Rate**

This first example is an overview of how the performance levels that are reported on the Dashboard (red, orange, yellow, green, and blue) are determined. Every state indicator that has both Status and Change Indicators is associated with a performance grid (table) that shows how an LEA’s or school’s performance will be classified. Based on criteria set by the state, the color an LEA or school earns in each indicator area informs the Dashboard report.

The district in the first example (Figure 1) does not have a small sample size and provides an explanation of calculating a performance level when there is an adequate sample size for each indicator. When sample sizes are greater than 150 students in the Graduation or Suspension Rates, a 5x5 Performance Grid is used to calculate their performance levels. Performance Grids display the school or district’s Status Indicator in rows and the Change Indicator in columns. The square where an LEA’s or school’s Status and Change Indicators intersect determines which of the five performance levels they have earned. These levels are then used to determine if a district will receive differentiated assistance.

In the example above, a district with an 87 percent Graduation Rate, with an increase from 84 percent from the prior year, would have a “Medium” Status Indicator and an “Increased” Change Indicator. The column and row intersect in a green box, meaning that the district would receive the green performance level for its Graduation Rate.

**Example 2: A K-5 School Serving 14 Students with No Suspensions during the Past Two Years**

In a K-5 school that serves 14 total students, all 14 students would be included in the calculation of the Suspension Rate.

The Smarter Balanced (SBAC) Assessments begin in third grade, however, so only the scores of students in grades three through five would be used to calculate the English language arts (ELA) and Mathematics performance levels. According to these sample sizes, the Dashboard’s Status and Change report would list the numerical values and the Status and Change levels for the school’s Suspension Rate, without a performance color. In this example, fewer than 11 students would have taken the SBAC, so the Dashboard would omit ELA and Mathematics performance entirely to protect student privacy.

Because Suspension Rates are calculated using all students enrolled K-12, it is more likely that small districts and counties have enough students to generate a report. On the other hand, Graduation Rates only measure one cohort of students (those who started ninth grade at the same time), so very small LEAs are less likely to have enough students to generate a Graduation Rate Indicator.

**Example 3: The Safety Net Methodology for a K-12 District Serving 500 Students**

The State Board of Education approved its Safety Net Methodology to calculate the performance levels for Graduation and Suspension Rates only. The Safety Net Methodology is applied to these two indicators because they were the two areas where over-identification in red or blue was most prevalent based on spring 2017 Dashboard results. This methodology is used for sample sizes between 30–150 students. In these cases, a 3x5—rather than a 5x5—performance grid is used to determine an LEA or school performance level. The Status Indicator still uses five possible ratings, ranging from “very low” to “very high.” The Change Indicator, however, is rated in one of only three ways: increased, maintained, or declined. “Declined significantly” and “increased significantly” are omitted from the grid (see Figure 2 below).

**Figure 2.** Example of the Adjusted 3x5 Performance Grid for the Suspension Rate Indicator

Level	Change				
	Increased Significantly	Increased	Maintained	Declined	Declined Significantly
Very Low	Gray	Green	Blue	Blue	Blue
Low	Gray	Yellow	Green	Green	Blue
Medium	Orange	Orange	Yellow	Green	Green
High	Red	Orange	Orange	Yellow	Yellow
Very High	Red	Red	Red	Orange	Yellow

Source: California School Dashboard Technical Guide, 2017-18 School Year

Some LEAs and schools will have their performance levels determined using both 3x5 and 5x5 performance grids, depending on the sample size for the particular indicator. The Safety Net Methodology is not based on the enrollment size of the LEA or school; it is based on the number of students used to calculate the Suspension and Graduation Rate indicators.

If a K-12 district serves 500 students, all 500 students would be included in calculating the Suspension Rate, and a 5x5 grid would be used to identify its performance level. That same district of 500 students, however, would almost certainly have fewer than 150 students in their most recent graduation cohort. In this case, the CDE would apply the Safety Net Methodology, and the district would be evaluated using a 3x5 grid for its Graduation Rate Indicator.

Perhaps few community members might ask questions at this level of detail, but it is helpful when board members are able to address why some grids differ. Furthermore, those serving LEAs with small sample sizes should know that the state has taken steps to prevent disproportionate identification for differentiated support.

## Endnotes

- 1 For more information on the various indicators used in the Dashboard, please refer to the CSBA Brief [The California School Dashboard: What Boards Need to Know for 2017-18](#).

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# Governance Brief

## School Board Members Get Down to Facts:

*Results of a CSBA Survey of Trustees on Key Education Topics*

by Julie Maxwell-Jolly, Mary Briggs, and Manuel Buenrostro

### Introduction

Board members are a key part of the California education landscape. They are the most direct connection to the local community and often provide the greatest continuity in the system, generally remaining in their positions longer than district administrators. Therefore, the board member perspective is essential to understanding the current state of California education.

The 2018 Getting Down to Facts (GDTF) II project was designed to provide a broad picture of the education landscape in California. Nonetheless, the project neglects an important part of that system: school district and county office of education trustees. The original project was to include the trustee perspective; however, the final reports omitted the results of a survey administered to board members. The results of that survey are reported in this brief, adding to a comprehensive understanding of the current California education system by including the experiences and perspectives of trustees of school districts and county offices of education.

To gather the views of board members on key education issues, CSBA, in collaboration with GDTF II researchers, administered a survey in March 2018 to randomly selected school district and county office of education board members. The survey had an approximately 25 percent response rate and the local educational agencies (LEAs) represented by the 260 board member respondents reflect a range of geographic locations, enrollment, and student demographics.

### Local Control Funding Formula

In 2013, policymakers reshaped California's K-12 public education system with the Local Control Funding

Formula (LCFF), which is based on three fundamental principles:

- » **Equity:** the knowledge that some students and schools have greater needs than others, and therefore require more resources to meet those needs;
- » **Multiple measures:** the importance of measuring school achievement more broadly than the heavy reliance on test scores under No Child Left Behind; and
- » **Subsidiarity:** the notion that local decision-makers know their communities and students best and therefore are better equipped to make decisions in support of these students.

School boards are essential in California's complex education system, especially in the context of local control. They are key participants in decisions about resources and policies that are central to the health of their LEAs and the success of the students they serve. This makes their experiences and perspectives necessary for a complete portrait of public education in California. School boards do not implement education strategies and approaches. Rather, they set the vision, goals, and direction of the LEA; establish policy to help carry these out; rely on the superintendent and LEA staff to use their professional expertise to apply strategies that will achieve the stated goals; and monitor the ongoing success of these strategies.

### LCFF Benefits Underserved Students

LCFF was structured to provide districts with supplemental funding for the additional resources required to educate students from several high-need groups: low-income students, homeless students, foster youth, and students identified as

English learners. LEAs receive supplemental funding for the “unduplicated” count of students that meet any of these criteria.

The survey asked board members to share their perceptions about the impact of LCFF on their district’s or COE’s ability to serve students from high-need groups. For the most part, participants felt that LCFF was positive for these students. Seventy-four percent of board members *agreed* or *strongly agreed* that LCFF had enabled their LEA to improve services and programs for their unduplicated students.

### *Greater Alignment between Resources and Local Priorities*

Prior to LCFF, critics noted that the state’s reliance on general purpose block grants and more than 60 categorical funding programs contributed to a fragmented educational system and made it difficult for LEAs to respond to the needs of their local context.<sup>1</sup> With LCFF, districts and county offices have greater flexibility to spend their funding in a manner consistent with local priorities. Policymakers and practitioners hoped that this approach would lead to greater alignment among LEA goals, strategies, and resource allocation decisions. Reflecting that goal, 73 percent of board members completing this survey said they *agreed* or *strongly agreed* that LCFF had fostered this type of alignment. A majority also noted an increased local role in resource allocation decisions after LCFF. Fifty-nine percent *agreed* or *strongly agreed* that LCFF had given them a stronger voice in the way resources are allocated in their LEAs than under the prior finance system of revenue limits and categorical programs.(n=222).<sup>i</sup>

### *LCAP Board Role and Preparation*

With LCFF, more educational decision-making has been returned to the local level, including an increased emphasis on seeking and incorporating stakeholder feedback in setting goals and selecting improvement strategies. The LCFF statute identifies the board of education as the body responsible for seeking stakeholder input and identifies which groups, at a minimum, must be consulted. The board is also responsible for final approval of the Local Control and Accountability Plan (LCAP), but the state offers little guidance about the role of the board beyond those areas.<sup>2</sup> To better understand the ways in which boards have been involved in LCFF decision-making, the survey asked board members a series of questions related to LCAP development.

The development of the LCAP is supervised by the superintendent, who oversees the district’s administrative

activities on a day-to-day basis. For the most part, these board members felt supported by the superintendent and staff regarding LCFF. Most said that their superintendent and LEA staff reinforced their understanding of LCFF and the LCAP: 84 percent *agreed* or *strongly agreed* that their superintendent encouraged board member involvement in the LCAP process. The same percentage (84 percent) *agreed* or *strongly agreed* that they had received adequate support and guidance on LCFF/LCAP matters.

The survey, however, did not capture how extensively superintendents believe the board should be involved in the LCAP process, how strongly they encouraged board member involvement, or how often they provided opportunities for engagement about the LCAP. Overall, 84 percent of respondents said that they saw a draft of the 2017–18 LCAP before it was brought to the board for public comment (n=218).<sup>3</sup> This runs counter to concerns that the board would be relegated to merely rubber-stamping the LCAP at the end of its development. To understand the LCAP activities in which board members engaged, participants were asked about several roles related to the LCAP. Of those who reported involvement in LCAP development beyond approving the final draft (a legal requirement outlined in LCFF), board members reported participating in several aspects of the process (n=219). For example, to some extent (from great to small) 87 percent of these trustees participated in board meetings to develop LCAP goals and resource priorities; 82 percent provided feedback on the LCAP as it was being written; 70 percent attended meetings devoted to receiving stakeholder feedback on the LCAP; and 53 percent served on a stakeholder committee with non-board members who provided LCAP input (see Figure 1).

### *Instructional Investments and LCFF*

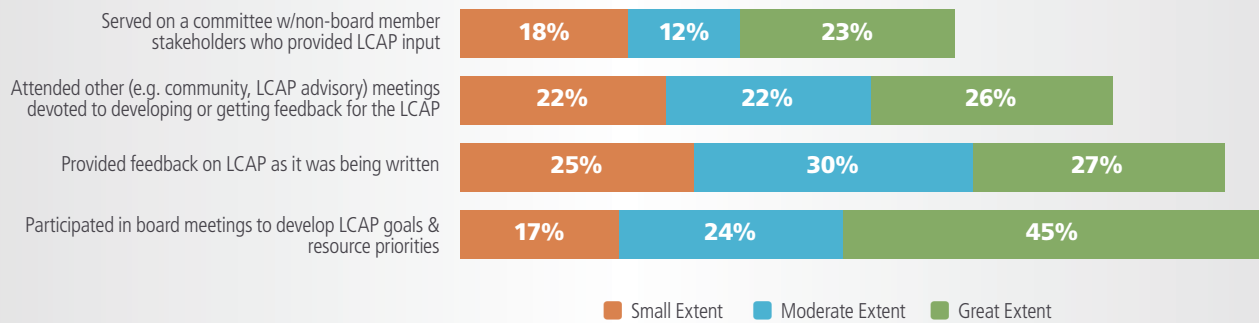
LCFF allows for greater flexibility in the way that districts invest in instruction. The survey included questions about two specific areas of instruction that are associated with the success of California students: implementation of California’s grade-level standards and Social and Emotional Learning (SEL).

### *Grade-Level Standards*

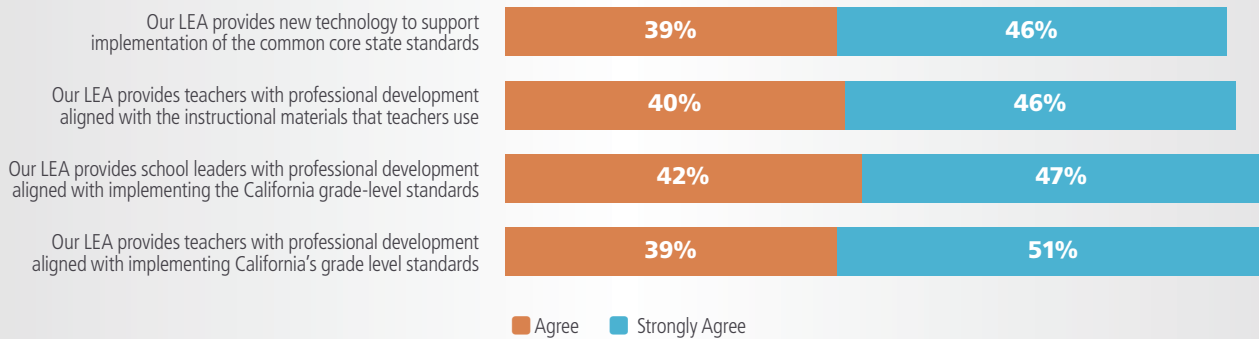
Nine in 10 board members reported that their districts or county offices of education have invested in professional learning associated with implementation of the state’s grade-level standards. Of 260 respondents, board members overwhelmingly reported that they have also provided

*i. Because not every survey participant answered every question, these numbers indicate how many board members responded to a particular question.*

**Figure 1: Degree of Involvement 2016-17 in LCAP Development**



**Figure 2: Implementation of Grade-Level Standards**



new technology for implementation of the Common Core State Standards and professional development related to instructional materials that teachers use (see Figure 2).

### Social and Emotional Learning

Social and Emotional Learning is associated with positive health, societal, and economic outcomes, and research suggests it is also a critical support for student learning, school climate, and safety.<sup>4</sup> While there is no single definition for SEL, the widely cited Collaborative for Academic, Social, and Emotional Learning identifies five core competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making.<sup>5</sup> In recent years, California state educational policies and the Every Student Succeeds Act (ESSA) have encouraged investments in school climate and other SEL-related areas. Board members reported their LEAs supported SEL (n=246):

- » 73 percent set clear goals for development of students' SEL skills
- » 72 percent provided professional learning to teachers to support students' development of SEL skills
- » 54 percent said their LEAs measure and report on success of support for development of students' SEL skills

Among these LEAs (n=239), board members said the most frequent measure of SEL was student behavior data. However, surveys were popular indicators as well. Indicators from most-to-least often used were:

1. 85 percent used student behavior data
2. 62 percent used student surveys
3. 59 percent used teacher surveys
4. 54 percent used parent surveys

## Teachers

Access to staff—particularly teachers—with the necessary qualifications and preparation is fundamental to student success. Research has shown that teachers are the most important in-school contributors to student achievement.<sup>6</sup> Additionally, the impact of quality teachers goes beyond academic achievement. One study found that students of effective teachers are more likely to attend college, attend higher-ranked colleges, earn higher salaries, and have lower rates of teen pregnancy.<sup>7</sup>

Unfortunately, California schools are experiencing a serious teacher shortage.<sup>8</sup> While recruitment is an important aspect of this challenge, the Learning Policy Institute affirms that retention continues to have a major impact on the shortage as well. This issue is particularly acute in certain school districts—about half of new teachers in California’s urban, low-income, and high-minority districts leave the field within five years.<sup>9</sup> In addition, while there is strong evidence that diversifying the teacher workforce benefits students and schools, retaining teachers of color is especially challenging.<sup>10</sup>

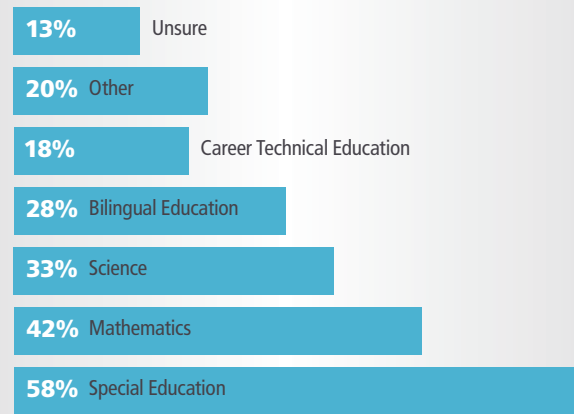
### Teacher Shortage

A 2016 survey of human resources directors by CSBA and the Learning Policy Institute found that 75 percent of surveyed LEAs (211 total) reported having a shortage of qualified teachers to fill their teaching vacancies.<sup>11</sup> A 2018 follow-up survey of district and county office of education human resources directors conducted by CSBA for the GDTF II report had similar findings.<sup>12</sup>

The survey of board members on which this brief is based focused on the severity of those shortages. In this survey, 78 percent of board members indicated that the teacher shortage was a serious issue to some degree—a percentage in keeping with surveys of HR directors in 2016 and 2018. Of the 235 board members who responded to the current survey, 38 percent said that the teacher shortage was serious or very serious in their LEA, while an additional 40 percent said the issue was a little serious.

Of 212 board members who responded to the question about areas of teacher shortage, special education and math were cited as the greatest shortages in their LEAs. Figure 3 indicates the areas in which board members reported a shortage in the 2017–18 year. This response should be understood as the board members’ perception of shortages. It is reasonable to assume most respondents did not have employment data readily available while they completed the electronic survey. The data, however, is consistent with the above-mentioned surveys of HR directors.

**Figure 3: Teacher Shortages, by Specialty Area (2017–18)**



These shortage areas closely mirror those from the GDTF II report, where shortages in special education, mathematics, and science account for half of California’s teacher vacancies.<sup>13</sup>

### Teacher Recruitment Efforts

Efforts by LEAs to address teacher shortages are important for board members to consider. Out of 229 respondents to this survey, 57 percent said their LEA had put in place new efforts to recruit and retain teachers in the past three years. Moreover, respondents from LEAs that implemented strategies were more likely to be those who indicated that the teacher shortage was a more serious issue in their districts. For example, out of 131 respondents from LEAs that implemented strategies, 45 percent thought the issue to be serious or very serious. By comparison, out of 71 respondents from LEAs that had not implemented strategies, only 35 percent thought the issue was serious or very serious.

Board members also cited various strategies for addressing shortages in their LEAs. When asked to select *up to three* promising strategies for addressing teacher shortages, the majority of the 215 board members who responded to this question cited increasing salaries or improving teacher working conditions as the most promising strategies (see Table 1).

However, there are several constraints faced by LEAs that might be impeding their efforts to implement new teacher recruitment and retention strategies. Out of the top challenges to implementing strategies to address teacher shortages, 215 respondents cited lack of finances as the greatest challenge. From most-to-least cited, the greatest challenges were:

**Table 1: Promising Strategies for Addressing Teacher Shortages**

Strategy	Agreement
Increase salaries	60%
Improve working conditions (e.g., providing time for collaboration)	54%
Develop alternative pathways into the profession	45%
Revise salary schedules, including in areas of need	42%
Partner with preparation programs to communicate hiring needs	31%
Increase marketing efforts	26%
Revise timelines for voluntary transfers or resignations so hiring processes take place earlier	16%
Signing bonuses	14%
Other	20%

1. Insufficient money (62 percent)
2. Collective bargaining restrictions (32 percent)
3. More pressing concerns in the district (25 percent)
4. Insufficient information about the effectiveness of strategies or models (16 percent)
5. Other (12 percent)

## Financial Constraints

Financial constraints have an impact on more than just teacher retention, and they also result from a variety of factors that include increasing financial costs, such as those for pensions.

### Rising Pension Costs

When LCFF was passed in 2013, the state promised to restore funding to 2007–08 levels, the year prior to the Great Recession. Yet passage of the STRS and PERS Reform Acts in 2014 required that employees, LEAs, and the state substantially increase their contributions to pension plans. By 2021, LEAs will be required to contribute 19.1 percent towards CalSTRS and 24.9 percent towards CalPERS. This is an increase from 8.3 percent and 11.4 percent, respectively,

from 2013–14 levels. While the state has essentially returned funding to 2007–08 levels, the state did not increase base funding to compensate for more than doubling the pension contribution rates.<sup>14</sup>

In per-pupil terms, LEAs spent, on average, \$497 per student on pensions in 2013–14. By 2023–24, these pension costs will rise to \$1,476 per student.<sup>15</sup> Rising costs outpace revenues, particularly for pensions and health care expenditures. While this brief does not present data on the fiscal impact of increased pension costs on participating LEAs, our survey sought to understand how board members perceived the potential impact on their LEAs’ ability to serve their students.

Of the 203 board members who answered an open-ended question on the impact of pension costs nearly all (88 percent) answered that pension costs were affecting their district or COE budgets and many added comments about the extent of this impact in their LEAs. The two comments below are representative of sentiments expressed by board members who indicated that pension costs were negatively impacting their district or COE budgets.

*“Pensions are eroding our ability to serve students. Also, the public has the impression that there is more money available for local needs when there isn’t. Pension costs should be paid before LCFF reaches the district.”*

*“Rising pension costs are making us feel like we are in a recession despite being in a strong economy! Limits our ability to negotiate effectively with bargaining units.”*

Of the 24 board members (12 percent) who said that pensions were not currently impacting their budgets, several said they had anticipated the rising costs and had reserves, a few others said that they anticipate it will be a problem in the future, and others noted that it “is just part of the budgeting process and the cost of doing business.”

### Securing Additional Resources

Given these financial constraints, LEAs have continued to seek additional resources beyond what is provided through their general funds. Out of 221 board members, 94 percent cited that their LEAs secure outside resources.

- » A majority of board members cited that their LEAs secured additional resources from grants (85 percent), community partnerships (63 percent), and their Parent Teacher Association (61 percent).
- » Nearly half cited resources from their district foundation (48 percent).
- » Out of those respondents that cited “other” (14 percent), many cited parcel taxes or bonds as sources of revenue.



## Conclusion

The results of the survey reported in this brief help round out a comprehensive understanding of the current California education system by including the experiences and perspectives of trustees of school districts and county offices of education, perspectives that the GDTF II project omitted in the final project papers.

Over 260 board members responded to this survey designed to gather their views and perspectives on a range of education issues. Most of these board members reported that LCFF is enabling LEAs to improve services and programs for unduplicated students and fostering greater alignment of spending with LEA goals and strategies. Trustees noted that they are involved in developing their LEAs' LCAPs and that district superintendents and staff have been helpful in that regard. They reported that they have made significant investments in two key areas to support student learning: implementation of California State Standards and social and emotional learning. Furthermore, most of these trustees said that their LEAs are experiencing teacher shortages—and in many cases these shortages are serious, particularly for special education, science, and math teachers. However, lack of funding remains a barrier for many LEAs. The majority indicated that the most successful strategies for addressing teacher shortages involved increasing salaries but reported that finding the funds to do this was challenging. Compounding the funding issue, rising pension costs are affecting the budgets of virtually all LEAs represented by these board members. Finally, while most districts supplement their funding through additional sources, they report concern that revenues, outpaced by rising costs, will negatively impact their ability to serve their students.

## Endnotes

- 1 Weston, M. (2011). California's New Funding Flexibility. Public Policy Institute of California: Sacramento. Retrieved from [http://www.ppic.org/content/pubs/report/R\\_511MWR.pdf](http://www.ppic.org/content/pubs/report/R_511MWR.pdf)
- 2 California Education Code § 52060(g)
- 3 This survey was administered in Spring 2018. Because LEAs were not required to have submitted their 2018-19 LCAPs, the question referred to the 2017-18 LCAP development process.
- 4 Berg, J., Osher, D., Moroney, D., & Yoder, N. (2017). The Intersection of School Climate and Social and Emotional Development. American Institutes for Research: Washington, D.C. Retrieved from <https://www.air.org/resource/intersection-school-climate-and-social-and-emotional-development>.
- 5 Collaborative for Academic, Social, and Emotional Learning (CASEL) Core SEL Competencies. <https://casel.org/core-competencies>

- 6 Hanushek, E. A. (2002). Teacher quality. In L. T. Izumi & W. M. Evers (Eds.), *Teacher Quality*. Hoover Press. Retrieved from <http://hanushek.stanford.edu/sites/default/files/publications/Hanushek%202002%20Teacher%20Quality.pdf>
- 7 Chetty, R., Friedman, J. N., & Rockoff, J. E. (2011). The long-term impacts of teachers: Teacher value-added and student outcomes in adulthood (No. w17699). National Bureau of Economic Research. Retrieved from <http://papers.nber.org/papers/w17699>
- 8 Carver-Thomas, D., & Darling-Hammond, L. (2017). Addressing California's growing teacher shortage: 2017 update. Palo Alto, CA: Learning Policy Institute. Retrieved from <http://bit.ly/2ivs7tq>
- 9 See endnote 8.
- 10 Hollinside, M. (2017) African-American Students in Focus: Supporting African-American Teacher Retention CSBA Governance Brief. [https://www.csba.org/-/media/CSBA/Files/GovernanceResources/GovernanceBriefs/201710\\_AfricanAmericanStudentIssue3.aspx?la=en&rev=0a2aa02c9ca9470f8aba0b4a55c964d0](https://www.csba.org/-/media/CSBA/Files/GovernanceResources/GovernanceBriefs/201710_AfricanAmericanStudentIssue3.aspx?la=en&rev=0a2aa02c9ca9470f8aba0b4a55c964d0)
- 11 Podolski, A., & Sutchter, L. (2016). California teacher shortages: A persistent problem. Learning Policy Institute and California School Boards Association. [https://www.csba.org/Advocacy/LegislativeNews/~/\\_media/CSBA/Files/Advocacy/LegislativeAdvocacy/201611\\_LPI-CSBA\\_California\\_Teacher\\_Shortages\\_BRIEF.aspx](https://www.csba.org/Advocacy/LegislativeNews/~/_media/CSBA/Files/Advocacy/LegislativeAdvocacy/201611_LPI-CSBA_California_Teacher_Shortages_BRIEF.aspx)
- 12 Darling-Hammond, L., Goldhaber, D., Strunk, K.O., & Sutchter, L. (2018). Teacher supply falls short of demand in high-need fields, locations. Getting Down to Facts II Research Brief. [http://gettingdowntofacts.com/sites/default/files/2018-09/GDTFII\\_Brief\\_TeacherSupply.pdf](http://gettingdowntofacts.com/sites/default/files/2018-09/GDTFII_Brief_TeacherSupply.pdf)
- 13 See endnote vi. (GDTF 2)
- 14 Krausen, K., & Willis, J. (2018). Silent Recession: Why California School Districts Are Underwater Despite Increases in Funding. San Francisco: WestEd. Retrieved from <https://www.wested.org/wp-content/uploads/2018/05/resource-silent-recession-2.pdf>.
- 15 Behind the Numbers: The cold, hard facts of California public school funding. CSBA Report. [https://www.csba.org/GovernanceAndPolicyResources/FairFunding/~/\\_media/CSBA/Files/Advocacy/LegislativeAdvocacy/010818\\_Behind-the-Numbers-SchoolFunding-Jan082018.aspx](https://www.csba.org/GovernanceAndPolicyResources/FairFunding/~/_media/CSBA/Files/Advocacy/LegislativeAdvocacy/010818_Behind-the-Numbers-SchoolFunding-Jan082018.aspx)

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# Governance Brief

## Meeting California's Challenge:

*Access, Opportunity, and Achievement: Key Ingredients for Student Success*

by Manuel Buenrostro

### Introduction

An adequately funded education system is one that provides the resources to ensure that all students graduate from high school prepared for college and career success. To achieve this, all students need robust educational opportunities and the necessary supports to take advantage of them. Unfortunately, significant opportunity gaps exist—principally between more affluent students and their peers from lower income families. These opportunity gaps are reflected in achievement gaps: only 31 percent of economically disadvantaged 4<sup>th</sup> graders scored proficient or advanced in English language arts/literacy, compared to 67 percent of their non-economically disadvantaged peers in the 2015-16 school year.<sup>1</sup>

A recently released CSBA report, [Meeting California's Challenge: Access, Opportunity, and Achievement: Key Ingredients for Student Success](#), describes an adequately-funded education system that ensures the educational opportunities that support student success. This brief provides a summary of the research-supported ingredients highlighted in the report and suggests key questions that board members can ask as they consider how to invest local resources in support of students.

It is our intention that this report, along with an earlier CSBA publication, [California's Challenge: Adequately Funding Education in the 21st Century](#), make the case for the need to provide additional funding for California's education system. In addition, we hope that the information in the report provides evidence that helps county offices of education, districts, and schools make investments that are equity-focused and research-supported.

#### This brief will answer the following questions:

- » What are some research-proven strategies that could be provided for every student with adequate funding?
- » What are some of the opportunity gaps impacting economically disadvantaged students and students of color?
- » What are the questions that board members can ask to ensure that equitable investments are being made in their schools?

### The Eight Ingredients and Equity

Multiple studies have shown that increases in school funding can result in improvements in student outcomes, particularly for low-income students.<sup>2</sup> In addition, how districts invest their resources is crucial. Districts should invest equitably—providing opportunities for students according to their needs—and effectively—dedicating resources to strategies for which there is evidence of a positive impact on students. To that end, the eight ingredients of an adequately funded education system described here and in the full report represent research-supported strategies to ensure that all students graduate college and career ready. They include:

1. A Rigorous, Well-Rounded, and Relevant Curriculum
2. Academic Support to Improve Achievement
3. Staff with the Skills, Competencies, and Knowledge to Promote Student Success

4. Early Support and Services
5. Education and Assistance for Families to Support and Guide Learning
6. Physical, Mental, and Environmental Health Supports
7. 21st-Century Infrastructure and Technology
8. Services for Students with Specific Needs

In order to close opportunity and achievement gaps, equity should be a key consideration in board decisions about how best to use local resources. An equity focus means holding all students to the same high expectations while providing the additional resources that some students might need in order to meet those expectations. Considering local and community factors is an important aspect of this equity lens. It will fall to the education system to provide opportunities to some students that others already have in their homes, communities, and schools.

### 1. A Rigorous, Well-Rounded, and Relevant Curriculum

All students need access to a rigorous, well-rounded, and relevant curriculum to graduate from high school, college and career ready. At a minimum, rigorous courses must meet A-G requirements in high school, while elementary and middle schools must prepare students for success in those courses. All students should have equal access to the Advanced Placement (AP), advanced math and science, and other rigorous courses that multiple studies have shown to provide academic and career benefits for students.<sup>3</sup> Recent research indicates that STEM coursework can be particularly helpful for promoting both science and language learning for English learners.<sup>4</sup>

A focus on relevance is important, as many students drop out because they are unmotivated and uninterested in their coursework.<sup>5</sup> Work-based learning opportunities can provide this relevance and have been associated with academic and career success past high school.<sup>6</sup> A well-rounded education that is not focused solely on Math and English language arts benefits students as well. Multiple studies have shown improved outcomes for students who take a more expanded curriculum that includes arts and physical education.<sup>7</sup>

### The Gaps in Opportunity

Students of color and economically disadvantaged students are less likely to attend schools that offer rigorous courses. Even when such courses are offered, these students are under-represented in advanced STEM and AP courses.<sup>8</sup> They are also more likely to graduate from high school without meeting A-G requirements.<sup>9</sup> This under-representation is due to multiple factors including few counselors who can advise students on courses and prerequisites, family experience that may not include knowledge of the courses necessary for college preparation, and lack of the necessary preparation in earlier grades for more advanced courses in high school.

## 2. Academic Support to Enable Achievement

It is not enough to offer students the opportunity to take rigorous and relevant coursework. Students also need a range of supports (e.g., counseling, expanded learning time, tutoring, mentoring, and personalized learning strategies, among others) to succeed in their coursework.

A variety of supports have been shown to have a positive impact on students' academic outcomes. These include, advisory programs, which provide students with academic and social support through a knowledgeable adult,<sup>10</sup> personalized learning practices,<sup>11</sup> peer tutoring,<sup>12</sup> and expanded learning time through summer and after school (which can be particularly helpful for English learners).<sup>13</sup> Enrichment activities such as field trips and other experiences also promote student success.

### The Gaps in Opportunity

Compared to all other states, California has the highest number of students per teacher, the second highest number of students per counselor, and the third highest number of students to total staff.<sup>14</sup> This means that access to an adult at school who can provide guidance and support for education decisions is lacking for many California students, a fact which disproportionately impacts students whose parents do not have experience that prepares them to provide this information and guidance. A gap also exists with regard to the other supports—such as enrichment activities—which are more available to wealthier students than their less economically advantaged peers.<sup>15</sup>

### 3. Staff with the Skills, Competencies, and Knowledge to Promote Student Success

Access to staff with the necessary qualifications and preparation to promote student learning is fundamental. Teachers are the most important in-school contributors to student achievement.<sup>16</sup> The impact of quality teachers goes beyond academic achievement, with students of effective teachers more likely to attend college, attend higher-ranked colleges, earn higher salaries, and have lower rates of teen pregnancy.<sup>17</sup>

An expanded and more diverse teacher pool that mirrors the backgrounds of California's students is also important. Staff members who understand their students' backgrounds and view students' language, culture, and experience as an asset, are important contributors to a positive school environment and improved academic and non-academic outcomes.<sup>18</sup> A successful strategy for closing opportunity and achievement gaps is to implement policies that place the best-prepared and experienced teachers with the highest-need students.

An effective education system also helps teachers build their capacity through professional development systems that provide them with time to collaborate, learn from each other, build instructional and cultural competencies, form connections with outside groups to bring relevance to their lessons, and receive mentorship and ongoing feedback to support improvement. Principals and other administrators also need preparation focused on building instructional leadership, creating a positive school climate, fostering student achievement, and supporting teachers and staff.

#### The Gaps in Opportunity

The students with the highest need are most often in classrooms with the least experienced and prepared teachers. Economically disadvantaged and students of color are more likely to attend schools with more teacher turnover, greater numbers of underprepared and underqualified teachers, and staff absenteeism.<sup>19</sup>

### 4. Early Support and Services

Providing support as early as possible, even before kindergarten can make a big difference in improving student achievement. The period before children enroll in kindergarten is one of dramatic brain growth and development. Therefore, appropriate and nurturing stimulation is essential to building the neural pathways, social skills, and self-confidence that will lead to future academic success.

Investing in early childhood education is one of the most cost-effective uses of resources, adding up to \$8 in savings for every \$1 invested.<sup>20</sup> These investments can address knowledge gaps early and prevent students from getting progressively further behind as they move through the grade levels.<sup>21</sup> Children who attend high-quality preschool, pre-kindergarten, or transitional kindergarten programs develop greater language, literacy, mathematical, and social skills.<sup>22</sup> These programs can also contribute to improved life outcomes, including a lower likelihood of becoming pregnant as a teen<sup>23</sup> or committing a crime<sup>24</sup> and a greater likelihood of graduating from high school,<sup>25</sup> reaching higher levels of educational attainment, and earning greater incomes.<sup>26</sup>

#### The Gaps in Opportunity

By age three, children from high-income families have double the vocabulary of same-age children from low-income families.<sup>27</sup> Moreover, only two in five California students have access to quality early education programs,<sup>28</sup> with low-income families less likely to attend preschools that meet the state criteria for high quality.<sup>29</sup>

### 5. Education and Assistance for Families to Support and Guide Learning

Parents are students' first and most important teachers. Therefore, the education system can improve student outcomes by helping parents and guardians to support their children's education at home, guide them through grade level and other transitions, and navigate important decisions (such as the college admissions process and career choices). Given California's diversity, family engagement can be more successful when staff understand the backgrounds of their students' families, including culture, socio-economic status, language status, and other factors. It is also important that parents and guardians have the chance to provide meaningful input into school decisions and to participate in learning opportunities, such as civics, leadership, English language, and GED courses.

Initiatives that support parent and guardian engagement have been shown to improve student outcomes.<sup>30</sup> These efforts are crucial because multiple studies indicate that students with parents who are engaged in their lives and in school are less likely to drop out of school<sup>31</sup> and have higher academic outcomes.<sup>32</sup>

### The Gaps in Opportunity

All parents and guardians care about their children's education. Nonetheless, parents with extensive education understand the system better, know what needs to be done in preparation for college, and more often have professional jobs that allow them the time to visit and participate in school activities as well as the financial resources to invest in trips, learning experiences, and supports such as tutoring. All of this contributes to a positive association between student achievement and parents' level of education.<sup>33</sup> Gaps are also associated with income status (which is itself strongly associated with education level), neighborhood characteristics, and a whole range of opportunities that come with greater education and income.

## 6. Physical, Mental, and Environmental Health Supports

If children are hungry, traumatized, or in pain, they will not be able to learn, and are more often absent from school. Furthermore, if they cannot regulate their emotions, manage challenges productively, or cooperate with their peers and teachers, they will have difficulty benefitting from instruction. A safe and healthy school environment is also essential for learning. Within that environment, students need opportunities for physical activity and encouragement of healthy lifestyle habits.

Daily physical activity has been shown to improve students' classroom behavior and ability to focus on schoolwork.<sup>34</sup> Multiple studies have also shown a negative impact on academic achievement of trauma and bullying<sup>35</sup> as well as an unfortunate prevalence of bullying and stress in schools,<sup>36</sup> particularly for lesbian, gay, bisexual, and transgender students.<sup>37</sup> A number of studies have also highlighted that building students' social-emotional (SEL) skills has a positive effect on academic achievement.<sup>38</sup> One such study found a significant association between SEL skill development in kindergarten and positive outcomes years later in education, employment, criminal activity, substance use, and mental health.<sup>39</sup>

### The Gaps in Opportunity

Nearly one in three 10-17 year olds in California is overweight or obese,<sup>40</sup> contributing to greater absenteeism among other problems.<sup>41</sup> Moreover, nearly two thirds of California students do not meet health and fitness standards in fifth, seventh, and ninth grades.<sup>42</sup> Physical and mental health challenges are particularly prevalent among economically disadvantaged students, who are more often students of color. Children in poverty are more likely to suffer from asthma, heart conditions, hearing problems, digestive disorders, and elevated levels of lead in the blood.<sup>43</sup> These children are also more likely to suffer from depression, anxiety, and stress, while at the same time having lower levels of health insurance coverage and more limited access to quality health services to address these issues.<sup>44</sup>

## 7. Schools with 21st Century Infrastructure and Technology

All students should have access to schools with a 21st century infrastructure, including classrooms, lab spaces, fields, gardens, and food preparation facilities. These facilities are essential to students' learning as well as to their health and safety. State of the art technology platforms are also critical to 21st century schools—students and families should have access to the internet in and around school. A technology platform should also include a robust data infrastructure with quality hardware, software, and trained staff to support the analysis and storage of data, and deployment of high-quality assessments and pedagogy for appropriate use of technology. Finally, when schools are not close enough for easy access, transportation options should be provided.

According to a survey by the United States Department of Education, over half of America's public school facilities need to be repaired, renovated, or modernized.<sup>45</sup> Furthermore, the implementation of the California State Standards, including the implementation of the Next Generation Science Standards (NGSS) and continued expansion of Career and Technical Education Programs, Career Academies, Career Pathways, Linked Learning, and other innovative approaches, will require quality lab spaces and equipment, beyond the basics covered in the report.

## The Gaps in Opportunity

A higher percentage of public schools in poor areas are in need of repair than those in wealthier places.<sup>46</sup> There is also more limited access to the internet<sup>47</sup> and teachers report more obstacles to using technology in low-income areas.<sup>48</sup> Another important infrastructure issue that impacts the health of students in and outside of school is access to a healthy water supply. While adequate water consumption has been associated with a number of health benefits and stronger student achievement,<sup>49</sup> aging lead water pipes are more common in the lowest-income neighborhoods or cities.<sup>50</sup>

## 8. Services for Students with Specific Needs

While every ingredient in this report is a critical component of serving all student groups, educators need to differentiate instruction and services in order to meet the specific needs of all students. Student groups—such as English learners, students identified for special education services, foster youth, homeless students, and others—need targeted support if we are to truly close opportunity gaps. For example, in the case of English learners and students identified for special education services, the district and school procedures for identification should result in proper placement of students in learning environments that can best meet their needs. Support systems should also meet the needs of foster youth, students experiencing homelessness, and others. Recruiting, training, and supporting staff who can identify students' needs and understand the most appropriate assessment and instructional strategies for specific student groups is highly important.

Despite the gaps and challenges, there is sufficient evidence that students with specific needs can achieve on par with their peers when the services they need are in place. For example:

- » English learners in programs that leverage their home language, provide rigorous courses, and integrate them into the school culture, show greater academic achievement than their peers in other programs.<sup>51</sup>
- » Special education students with early supports and interventions improve their school outcomes and such supports can reduce the number of students identified with learning disabilities.<sup>52</sup>
- » Foster youth who are provided with social supports that improve their confidence and allow them to participate in community activities, have greater social and academic success.<sup>53</sup>

## Conclusion

A public education system that provides free, quality, and appropriate schooling to all students is essential to a strong democratic society. This system should have the necessary resources to ensure that all students can succeed and that these resources are distributed equitably in order to provide meaningful opportunity for all students.

The Local Control Funding Formula (LCFF) made important changes in support of education including an explicit focus on equity and greater flexibility for decision-making at the local level. However, LCFF by itself does not provide more funding for California schools. In addition, districts are facing mounting fixed costs, such as school district pension obligations. This gap in funding emphasizes the urgent need to invest in our most precious resource—the young people who represent our future. Until that fundamental deficit is addressed, many students and their families will not have access to the opportunities described in this brief, and closing achievement and opportunity gaps will be an uphill battle.

CSBA will continue to advocate for adequate funding that supports these opportunities. CSBA will also continue to provide information that supports making the best use of the resources available. Board members should consider the eight key ingredients as areas of potential investment. For a more detailed description of each ingredient, research, and examples of programs across the state, reference the full report, [Meeting California's Challenge: Access, Opportunity, and Achievement: Key Ingredients for Student Success](#).

## Questions for Board Members

Board members can ask the following questions when considering investments that help to close opportunity and achievement gaps:

1. Do we have a common definition of student success in the district or county office of education? If we do, how many of our students are successful?
2. What are the highest areas of need? How do we know that these are the areas of need?
3. Which resources are available in the community that are providing opportunities for students? Are there gaps in the availability of opportunities to some students?
4. Which district or county office of education programs have been producing the greatest academic and non-academic outcomes for students? How can these existing programs be expanded or supported further?
5. Are we making investments equitably? Are we using resources in a way that closes opportunity gaps?

## Endnotes

- 1 CSBA Analysis: California Assessment of Student Performance and Progress. *2016 California statewide research file, all sub-groups*. Downloaded March 9, 2017 from <http://bit.ly/2whQEYv>
- 2 Card, D., & Payne, A. A. (2002). School finance reform, the distribution of school spending, and the distribution of student test scores. *Journal of Public Economics*, 83(1), 49-82. Retrieved from <http://bit.ly/2ijJCg4>

Greenwald, R., Hedges, L.V., & Laine, R. D. (1996). The effect of school resources on student achievement. *Review of Educational Research*, 66(3), 361-396. Retrieved from <http://bit.ly/2xlDh6q>

Lafortune, J., Rothstein, J., & Schanzenbach, D. W. (2016). *School finance reform and the distribution of student achievement* (No. w22011). National Bureau of Economic Research.
- 3 Black, S. E., He, Z., Muller, C., & Spitz-Oener, A. (2015). *On the origins of STEM: The role of high school STEM coursework in occupational determination and labor market success in mid-life*. Retrieved from <http://bit.ly/2x6xW3Q>

Rose, H., & Betts, J. R. (2004). The effect of high school courses on earnings. *The Review of Economics and Statistics*, 86(2), 497-513. Retrieved from <http://bit.ly/2v7vI2F>

Smith, J., Hurwitz, M., & Avery, C. (2017). Giving college credit where it is due: Advanced Placement exam scores and college outcomes. *Journal of Labor Economics*, 35(1), 67-147. Retrieved from <http://bit.ly/2vXnD20>

Purnell, R. (2014). *A guide to launching and expanding dual enrollment programs for historically underserved students in California*. Berkeley, CA: Research and Planning Group for California Community Colleges in collaboration with the California Community Colleges Chancellor's Office and the San Joaquin Delta Community College District. Retrieved from <http://bit.ly/2wxuW2w>
- 4 Feldman, S., & Malagon, V. F. (2017). *Unlocking learning: Science as a lever for English learner equity*. Oakland, CA: The Education Trust-West. Retrieved from <http://bit.ly/2xliMqT>
- 5 Bridgeland, J. M., Dilulio Jr, J. J., & Morison, K. B. (2006). *The silent epidemic: Perspectives of high school dropouts*. Civic Enterprises in association with Peter D. Hart Research Associates for the Bill & Melinda Gates Foundation. Retrieved from <http://bit.ly/2vinmVa>
- 6 The Center for Advanced Research and Technology. (2011). *A model for success: CART's Linked Learning program increases college enrollment*. Clovis, CA. Retrieved from <http://bit.ly/2v7CC83>
- 7 Smithrim, K., & Uptis, R. (2005). Learning through the arts: Lessons of engagement. *Canadian Journal of Education*, 28(1-2) 109-127. Retrieved from <http://bit.ly/2wgUOjw>

Wilkins, J., Graham, G., Parker, S., Westfall, S., Fraser, R., & Tembo, M. (2003). Time in the arts and physical education and school achievement. *Journal of Curriculum Studies*, 35(6), 721-734. Retrieved from <http://bit.ly/2vi3Qs6>

Catterall, J. S. (2009). *Doing well and doing good by doing art: The effects of education in the visual and performing arts on the achievements and values of young adults*. Los Angeles/London: Imagination Group/I-Group Books.
- 8 CSBA Analysis: Civil Rights Data Collection. *2011-12 state and national estimations*. Downloaded February 8, 2017 from <http://bit.ly/2v7Zy7e>
- 9 California Department of Education. *12th grade graduates completing all courses required for U.C. and/or C.S.U. entrance, all students, 2015-16*. Downloaded April 13, 2017 from <http://bit.ly/2whGszl>

California Department of Education. *12th grade graduates completing all courses required for U.C. and/or C.S.U. entrance, sociodisadvantaged students, 2015-16*. Downloaded April 13, 2017 from <http://bit.ly/2ilAWFY>
- 10 Shulkind, S. B., & Foote, J. (2009). Creating a culture of connectedness through middle school advisory programs. *Middle School Journal*, 41(1), 20-27.
- 11 Pane, J. F., Steiner, E. D., Baird, M. D., & Hamilton, L. S. (2015). *Continued progress: Promising evidence on personalized learning*. The Rand Corporation. Retrieved from <http://bit.ly/2whsFZO>
- 12 Prater, D. L., & Bermudez, A. B. (1993). Using peer response groups with limited English proficient writers. *Bilingual Research Journal*, 17(1-2), 99-116.
- 13 McCombs, J. S., Augustine, C. H., Schwartz, H. L., Bodilly, S. J., McInnis, B., Lichter, D. S., & Cross, A. B. (2011). *Making summer count: How summer programs can boost children's learning*. Santa Monica, CA: The RAND Corporation. Retrieved from <http://bit.ly/2whDvyO>

Augustine, C. H., McCombs, J. S., Pane, J. F., Schwartz, H. L. Schweig, J., McEachin, A., Siler-Evans, K. (2016). *Learning from Summer: Effects of voluntary summer learning programs on low-income urban youth*. Santa Monica, CA: The RAND Corporation. Retrieved from <http://bit.ly/2vYU1pL>

Afterschool Alliance. (2011). *STEM learning in afterschool: An analysis of impact and outcomes*. Washington, DC. Retrieved from <http://bit.ly/2wiNJ1M>
- 14 CSBA Analysis: National Center for Education Statistics. *State nonfiscal public elementary/secondary education survey data, 2014-15*. Downloaded March 9, 2017 from <http://bit.ly/2wsOacm>
- 15 Duncan, G. J., & Murnane, R. J. (2014). *Restoring opportunity: The crisis of inequality and the challenge for American education*. Cambridge, MA: Harvard Education Press.
- 16 Hanushek, E. A. (2002). *Teacher quality*. In L. T. Izumi & W. M. Evers (Eds.), *Teacher Quality*. Hoover Press. Retrieved from <http://stanford.io/2x7a9Rr>
- 17 Chetty, R., Friedman, J. N., & Rockoff, J. E. (2011). The long-term impacts of teachers: *Teacher value-added and student outcomes in adulthood* (No. w17699). National Bureau of Economic Research. Retrieved from <http://bit.ly/2vYrCeF>
- 18 Gershenson, S., Hart, C. M. D., Lindsay, C. A., & Papageorge, N. W. (2017). *The long-run impacts of same-race teachers*. IZA Discussion Paper No. 10630. Retrieved from <http://bit.ly/2wiLtrw>

Gershenson, S., Holt, S. B., & Papageorge, N. W. (2016). Who believes in me? The effect of student-teacher demographic match on teacher expectations. *Economics of Education Review*, 52, 209-224.

Villegas, A. M., & Lucas, T. (2002). Preparing culturally responsive teachers rethinking the curriculum. *Journal of teacher education*, 53(1), 20-32.

- 19 Darling-Hammond, L., Furger, R., Shields, P. M., & Sutchter, L. (2016). *Addressing California's emerging teacher shortage: An analysis of sources and solutions*. Learning Policy Institute. Accessed from <http://bit.ly/28NLynn>
- California Department of Education. (2015). *California state plan to ensure equitable access to excellent educators*. Retrieved from <http://1.usa.gov/1SgvNe0>
- 20 The White House, Council of Economic Advisers. (2015). *The economics of early childhood investments*. Retrieved from <http://bit.ly/2fZK2aW>
- 21 Grusky, D. B., Coddou, M., Cumberworth, E., Fisher, J., Furuta, J., Hill, J., Kimberlin, S., King, M., Kucheva, Y., Leupp, R., Mattingly, M., Rodriguez, N., Varner, C., & Wright, R. (2015). *Why is there so much poverty in California? The causes of California's sky-high poverty and the evidence behind the equal opportunity plan for reducing it*. Stanford, CA: Stanford Center on Poverty and Inequality. Retrieved from <http://stanford.io/2imnlc2>
- 22 Yoshikawa, H., Weiland, C., Brooks-Gunn, J., Burchinal, M. R., Espinosa, L. M., Gormley, W. T., Ludwig, J., Magnuson, K. A., Phillips, D., & Zaslow, M. J. (2013). *Investing in our future: The evidence base on preschool education*. Washington, DC: Society for Research in Child Development. Retrieved from <http://bit.ly/2wyf7IW>
- Barnett, W. S., Jung, K., Youn, M., & Frede, E. C. (2013). *Abbott preschool program longitudinal effects study: Fifth grade follow-up*. New Brunswick, NJ: National Institute for Early Education Research. Retrieved from <http://bit.ly/2v0h6X1>
- Gottfried, M. A. (2017). ELL school readiness and pre-kindergarten care. *Educational Policy*, 31(1), 39-72.
- Gottfried, M. A., & Kim, H. Y. (2015). Formal versus informal prekindergarten care and school readiness for children in immigrant families: A synthesis review. *Educational Research Review*, 16, 85-101.
- Boyd, J., Barnett, W. S., Bodrova, E., Leong, D. J., Gomby, D. (2005). *Promoting children's social and emotional development through preschool education*. New Brunswick, NJ: National Institute for Early Education Research. Retrieved from <http://bit.ly/2vTypHV>
- Manship, K., Quick, H., Holod, A., Mills, N., Ogut, B., Chernoff, J. J., Blum, J., Hauser, A., Anthony, J., & González, R. (2015). *Impact of California's transitional kindergarten program, 2013-14*. San Mateo, CA: American Institutes for Research. Retrieved from <http://bit.ly/2v0EmUL>
- 23 Campbell, F. A., Ramey, C. T., Pungello, E., Sparling, J., & Miller-Johnson, S. (2002). Early childhood education: Young adult outcomes from the Abecedarian Project. *Applied Developmental Science*, 6(1), 42-57.
- 24 Reynolds, A. J., Temple, J. A., Robertson, D. L., & Mann, E. A. (2001). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest: A 15-year follow-up of low-income children in public schools. *Jama*, 285(18), 2339-2346. Retrieved from <http://bit.ly/2imOnpx>
- 25 Belfield, C. R., & Levin, H. M. (2007). *The return on investment for improving California's high school graduation rate*. Santa Barbara, CA: California Dropout Research Project. Retrieved from <http://bit.ly/2vjhwTq>
- 26 Melhuish, E. C. (2011). Preschool matters. *Science*, 333(6040), 299-300.
- 27 Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experience of young American children*. Baltimore, MA: Paul H. Brookes Publishing Co.
- 28 The Education Trust-West. (2015). *Black minds matter: Supporting the educational success of Black children in California*. Oakland, CA. Retrieved from <http://bit.ly/2x7bl78>
- 29 Barnett, W. S., Friedman-Krauss, A. H., Gomez, R. E., Horowitz, M., Weisenfeld, G. G., Brown, K. C., & Squires, J. H. (2016). *The state of preschool 2015: State preschool yearbook*. New Brunswick, NJ: The National Institute for Early Education Research. Retrieved from <http://bit.ly/2xmx1w>
- 30 Sheldon, S. B., & Jung, S. B. (2015). *The family engagement partnership: Student outcome evaluation*. Johns Hopkins University School of Education: Center on School, Family, and Community Partnerships. Retrieved from <http://bit.ly/2g0mzpy>
- Goff Pejisa & Associates. (2014). *St. Paul Federation of Teachers Parent/ Teacher Home Visit Project evaluation*. Retrieved from <http://bit.ly/2v8GxSc>
- 31 Rumberger, R. W., Ghatak, R., Poulos, G., Ritter, R. L., & Dornbusch, S. M. (1990). Family influences on dropout behavior in one California high school. *Sociology of Education*, 63(4), 283-299.
- 32 Jeynes, W. H. (2005). *Parental involvement and student achievement: A meta-analysis*. Harvard Family Research Project. Retrieved from <http://bit.ly/2fZs6Ns>
- 33 See endnote 1
- 34 Centers for Disease Control and Prevention. (2010). *The association between school based physical activity, including physical education, and academic performance*. Atlanta, GA: U.S. Department of Health and Human Services. Retrieved from <http://bit.ly/2wrYUFX>
- Carlson, J. A., Engelberg, J. K., Cain, K. L., Conway, T. L., Mignano, A. M., Bonilla, E. A., Geremia, C., & Sallis, J. F. (2015). Implementing classroom physical activity breaks: Associations with student physical activity and classroom behavior. *Preventive medicine*, 81, 67-72.
- 35 Goodman, R. D., Miller, M. D., & West-Olatunji, C. A. (2012). Traumatic stress, socioeconomic status, and academic achievement among primary school students. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4(3), 252-259.
- Nakamoto, J., & Schwartz, D. (2009). Is peer victimization associated with academic achievement? A meta-analytic review. *Social Development*, 19(2), 221-242.
- Juvonen, J., Wang, Y., & Espinoza, G. (2010). Bullying experiences and compromised academic performance across middle school grades. *Journal of Early Adolescence*, 31(1), 152-173.
- 36 Centers for Disease Control and Prevention. (2016). *Understanding bullying: Fact sheet*. Retrieved from <http://1.usa.gov/1IQZaFj>
- Austin, G., Hanson, T., Polik, J., & Zheng, C. (2016). *School climate, substance use, and student well-being in California, 2013-2015: Results of the fifteenth Biennial Statewide Student Survey, Grades 7, 9, and 11*. San Francisco, CA: WestEd Health & Human Development Program. Retrieved from <http://bit.ly/2g0mRgy>



- 37 Kosciw, J. G., Greytak, E. A., Ciga, N. M., Villenas, C., & Danischewski, D. J. (2016). *The 2015 National School Climate Survey: The experiences of lesbian, gay, bisexual, transgender, and queer youth in our nation's schools*. New York, NY: GLSEN. Retrieved from <http://bit.ly/2vYayFu>
- 38 Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D. & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405–432. Retrieved from <http://bit.ly/2g0alby>
- 39 Jones, D. E., Greenberg, M., & Crowley, M. (2015). Early social-emotional functioning and public health: The relationship between kindergarten social competence and future well-being. *American Journal of Public Health*, 105(11), 2283-2290. Retrieved from <http://bit.ly/2iITCpe>
- 40 The Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health. 2011/12 *National Survey of Children's Health*. Downloaded April 19, 2017 from <http://bit.ly/2xmvY8v>
- 41 Geier, A. B., Foster, G. D., Womble, L. G., McLaughlin, J., Borradaile, K., E., Nachmani, J., Sherman, S., Kumanyika, S., & Shultz, J. (2007). The relationship between relative weight and school attendance among elementary schoolchildren. *Obesity*, 15(8), 2157–2161. Retrieved from <http://bit.ly/2vjs2dD>
- 42 California Department of Education. *2015-16 California physical fitness report*. Downloaded April 19, 2017 from <http://bit.ly/2imPOPV>
- 43 Case, A., Lubotsky, D., & Paxson, C. (2002). Economic status and health in childhood: The origins of the gradient. *The American Economic Review*, 92(5), 1308–1334
- 44 Ekono, M., Jiang, Y., & Smith, S. (2016). *Young children in deep poverty*. New York, NY: National Center for Children in Poverty. Retrieved from <http://bit.ly/2widhw0>
- 45 Alexander, D., Lewis, L., & Ralph, J. (2014). *Condition of America's public school facilities: 2012–13*. Washington, DC: National Center for Education Statistics. Retrieved from <http://bit.ly/2vYvbBi>
- 46 See endnote 45
- 47 Pew Research Center. (2017). Internet/broadband fact sheet. Washington, DC. Retrieved from <http://pewrsr.ch/2vXPDIX>
- 48 Zickuhr, K., Smith, A. (2012). *Digital differences*. Washington, DC: Pew Research Center's Internet & American Life Project. Retrieved from <http://pewrsr.ch/2xm947h>
- 49 Popkin, B. M., D'Anci, K. E., & Rosenberg, I. H. (2010). Water, hydration, and health. *Nutrition Reviews*, 68(8), 439-458.
- 50 McNichol, E. C. (2016). *It's time for states to invest in infrastructure*. Washington, DC: Center on Budget and Policy Priorities. Retrieved from <http://bit.ly/2x7lqQs>
- 51 Thomas, W. P., & Collier, V. P. (2002). *A national study of school effectiveness for language minority students' long-term academic achievement*. Center for Research on Education, Diversity & Excellence. Retrieved from <http://bit.ly/2viZsJl>
- Umanski, I. M., & Reardon, S. F. (2014). Reclassification patterns among Latino English learner students in bilingual, dual immersion, and English immersion classrooms. *American Educational Research Journal*, 51(5), 879-912. Retrieved from <http://bit.ly/2vjtv3x>
- Valentino, R. A., Reardon, S. F. (2014). *Effectiveness of four instructional programs designed to serve English learners: Variation by ethnicity and initial English proficiency*. Stanford University Graduate School of Education. Retrieved from <http://stanford.io/2wioDjF>
- 52 Muschkin, C. G., Ladd, H. F., Dodge, K. A. (2015). Impact of North Carolina's early childhood initiative on special education placements in third grade. *Educational Evaluation and Policy Analysis*, 37(4), 478-500. Retrieved from <http://bit.ly/2vT3jA8>
- Shaywitz, S. E., & Shaywitz, B. A. (2004). Reading disability and the brain. *Educational Leadership*, 61(6), 6–11. Retrieved from <http://bit.ly/2ikTqXp>
- Hughes, C., & Dexter, D. D. *Field studies of RTI programs, revised*. RTI Action Network. Retrieved from <http://bit.ly/2x7GFCM>
- 53 Kirk, R., & Day, A. (2011). Increasing college access for youth aging out of foster care: Evaluation of a summer camp program for foster youth transitioning from high school to college. *Children and Youth Services Review*, 33(7), 1173-1180.
- Hass, M. & Graydon, K. (2009). Sources of resiliency among successful foster youth. *Children and Youth Services Review*, 31(4), 457-463.
- Rios, S. & Nevin, A. I. (2009). What do former foster youth say about their academic journey to get into college? Implications for K-12 education. *Florida Educational Leadership*, 9(2), 44-53. Retrieved from <http://bit.ly/2x7ioww>
- Lovitt, T., & Emerson, J. (2008). Foster youth who have succeeded in higher education: common themes. National Center on Secondary Education and Transition Information, 7(1). Retrieved from <http://bit.ly/2vYI9il>

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