

Closing the Homework Gap in California

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Acknowledgments

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The **Alliance for Excellent Education** (All4Ed) is a Washington, DC–based national policy, practice, and advocacy organization dedicated to ensuring that all students, particularly those underperforming and those historically underserved, graduate from high school ready for success in college, work, and citizenship. all4ed.org

The **Linked Learning Alliance** is a statewide coalition of education, industry, and community organizations dedicated to improving California's high schools and preparing all students for success in college, career, and life. linkedlearning.org

The **Small School Districts' Association** started in 1983 and the mission is to provide relevant information and proactive assistance to small school district governing boards and superintendents through legislative advocacy, collaboration, professional development, and support services. ssda.org

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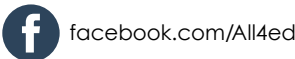


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Introduction

Years before the COVID-19 pandemic forced California's students to learn remotely, Corcoran Unified School District (CUSD) understood the challenges students face when they do not have access to home internet service and computers. Up until recently, 90 percent of CUSD's students did not have internet access at home. In this small rural school district located in California's Central Valley, 90 percent of students qualify for free or reduced-price meals and 85 percent identify as Latino. Recognizing the inherent inequities that lack of internet access causes, CUSD embarked on a multiyear effort to provide all its 3,300 students with free home internet. The district, which has embraced [Linked Learning](#) to drive college and career readiness, kept students connected and engaged with educators and industry partners to create opportunities for students to continue to grow through real-world experiences.

CUSD leaders began by using federal E-rate funds to upgrade the district's internet service and Wi-Fi network. Then, CUSD partnered with the Kings County Office of Education to install equipment that broadcasts the school district's wireless internet signal into the surrounding community. The district provided every student's family with a free router to access the internet signal at home and since has equipped all students with either a tablet (for kindergarteners through eighth graders) or laptop (for ninth through twelfth graders). CUSD supported the effort through a combination of additional E-rate and Title I funds, state technology grants, and local budget savings.

"Every little dime we could get we would invest in the effort," says CUSD Superintendent Rich Merlo. "We knew [expanded internet access] wouldn't automatically grant academic achievement, but we knew it could influence it. It could take our students to the next step in their learning. Our students need this."

Understanding California's Homework Gap

CUSD is not the only district with a large percentage of disconnected students. Across California, more than 1.6 million children live in homes without high-speed internet access and nearly 750,000 live in homes without a computer. These findings

come from a new analysis¹ of data from the 2019 American Community Survey conducted by John Horrigan, a national expert on technology adoption, for the Alliance for Excellent Education, Linked Learning Alliance, and Small School Districts' Association. In this analysis, "high-speed home internet" refers to a wireline broadband internet subscription—high-speed internet service provided via cable, fiber, or digital subscriber line (DSL). Meanwhile, "computer" refers to a laptop, desktop, or tablet computer. The findings presented here do not reflect recent efforts by the California Department of Education and local school districts to provide students with computers to support distance learning during the pandemic.²

This digital divide—also described as the "homework gap"—spans across California, but it disproportionately impacts *children of color and those living in rural areas and in low-income families*. Research shows that, regardless of race or socioeconomic status, middle and high school students who lack high-speed home internet access have poorer academic outcomes than their connected peers. These students have lower overall grade point averages, lower digital skills, and are less likely to attend college.³ Consequently, California policymakers must provide the resources and financial investments needed to ensure all California children have the high-speed internet access and devices necessary for educational success.

Latino Children Are the Least Likely to Have High-Speed Home Internet Access and Computers

California's Latino children represent the largest group lacking access to high-speed home internet and devices, both in terms of percentage and sheer number. More than one-quarter of Latino households with children do not have high-speed internet access and 14 percent do not have a computer. That means that nearly 1.1 million Latino children live in homes without high-speed internet access and almost 600,000 do not have a home computer.

TABLE 1: Internet and Device Access in California by Race and Ethnicity

		All	White	Black	Latino	Asian	American Indian/Alaska Native
Statewide	Percentage of Households Without High-Speed Home Internet Access	18.8%	17.8%	23.0%	25.9%	10.6%	24.1%
	Number of Children Without High-Speed Home Internet Access	1,663,600	964,351	122,128	1,060,586	136,569	41,991
	Percentage of Households Without a Computer	8.4%	7.6%	12.3%	14.1%	2.6%	10.3%
	Number of Children Without a Computer	745,572	453,225	67,038	592,191	33,546	19,696
Nonmetropolitan "Rural" Locations	Percentage of Households Without High-Speed Home Internet Access	27.5%	27.9%	37.1%	31.7%	11.5%	46.0%
	Number of Children Without High-Speed Home Internet Access	80,336	56,305	4,698	29,001	4,490	5,854
	Percentage of Households Without a Computer	11.3%	11.4%	15.8%	19.6%	14.6%	14.3%
	Number of Children Without a Computer	34,160	29,792	2,029	19,336	1,705	2,263
Metropolitan Locations	Percentage of Households Without High-Speed Home Internet Access	18.4%	17.1%	22.4%	25.9%	10.6%	20.7%
	Number of Children Without High-Speed Home Internet Access	1,583,264	908,046	117,431	1,031,585	132,078	36,137
	Percentage of Households Without a Computer	8.3%	7.3%	12.3%	14.1%	2.7%	10.0%
	Number of Children Without a Computer	711,413	423,433	65,009	572,855	31,841	17,433

Source: 2019 American Community Survey

Notes: "High-speed home internet" refers to a wireline broadband internet subscription—high-speed internet service provided via cable, fiber, or digital subscriber line (DSL). "Computer" refers to a laptop, desktop, or tablet computer. "Households" refers to households with one or more children age 17 years or younger. The totals in the "All" column do not equal the total number of children for all racial and ethnic groups combined since the American Community Survey includes some children in multiple groups based on how they self-identify their race and/or ethnicity.

Access to High-Speed Home Internet and Computers Varies by Location Across the State

Together, Los Angeles County and neighboring San Bernardino County account for more than 550,000 children without high-speed home internet access and more than 245,000 children without home computers, as table 3 shows on page 5. This means that about one-third of California's children without broadband internet or devices at home live in these two counties alone.

Yet, lack of internet and computer access is not limited to urban counties. More than 27 percent of families living in nonmetropolitan⁴ (or rural) areas in California do not have high-speed home internet access, compared to about 18 percent each in metropolitan (or urban) areas and statewide. In the state's northern rural counties, including Del Norte, Lassen, Modoc, and Humboldt, more than one-third of households with children do not have high-speed internet. Meanwhile in Madera County, located in the geographic center of the state, nearly 4 in 10 households with children do not have high-speed internet access—the highest percentage statewide. Collectively, more than 80,000 children who live in rural California communities do

TABLE 2: Internet and Device Access in California by Household Income

		All Households	Households with Annual Income Below \$25,000	Households with Annual Income Between \$25,000 and \$50,000	Households with Annual Income Between \$50,000 and \$75,000	Households with Annual Income Between \$75,000 and \$150,000	Households with Annual Income Above \$150,000
Statewide	Percentage of Households Without High-Speed Home Internet Access	18.8%	39.2%	28.7%	23.6%	14.0%	7.5%
	Number of Children Without High-Speed Home Internet Access	1,663,600	375,258	446,245	308,132	370,545	163,420
	Percentage of Households Without a Computer	8.4%	22.3%	16.4%	11.0%	4.5%	1.2%
	Number of Children Without a Computer	745,572	212,501	251,624	140,279	115,920	25,248
Nonmetropolitan "Rural" Locations	Percentage of Households Without High-Speed Home Internet Access	27.5%	44.5%	41.3%	26.1%	24.9%	12.7%
	Number of Children Without High-Speed Home Internet Access	80,336	16,279	24,103	10,579	19,624	9,751
	Percentage of Households Without a Computer	11.3%	29.6%	19.2%	7.0%	7.0%	1.5%
	Number of Children Without a Computer	34,160	11,061	11,045	5,079	5,928	1,047
Metropolitan Locations	Percentage of Households Without High-Speed Home Internet Access	18.4%	39.0%	28.0%	23.5%	13.4%	7.2%
	Number of Children Without High-Speed Home Internet Access	1,583,264	358,979	422,141	297,553	350,921	153,669
	Percentage of Households Without a Computer	8.3%	21.9%	16.2%	11.2%	4.4%	1.2%
	Number of Children Without a Computer	711,413	201,440	240,579	135,201	109,992	24,201

Source: 2019 American Community Survey

Notes: "High-speed home internet" refers to a wireline broadband internet subscription—high-speed internet service provided via cable, fiber, or digital subscriber line (DSL). "Computer" refers to a laptop, desktop, or tablet computer. "Households" refers to households with one or more children age 17 years or younger.

not have high-speed internet access at home. Similarly, rural locations in the state also have a higher percentage of families without a computer—11.3 percent—compared to about 8 percent each in urban areas and statewide.

"There is so much focus on urban areas, but the rural kids are being left behind," says J. Stuart Packard, president of the Small School Districts' Association and superintendent of Buttonwillow Union School District, a small district located in a rural farming town in Kern County. In Buttonwillow, 95 percent of students identify as Latino and 92 percent live in low-income families. "In a district like ours, the issue is affordability [of internet service]. ... In extremely rural districts, internet service does not even exist."

Racial and Income Disparities Are More Pronounced in Rural Areas

Disparities in internet and computer access exist along racial and socioeconomic lines throughout California; however, those disparities are greater in rural parts of the state. For instance, statewide and in urban areas, about 23 percent of Black households do not have high-speed home internet access. In rural areas, though, that percentage jumps to almost 40 percent. Similarly, 24 percent of American Indian/Alaska Native households statewide and 21 percent in urban areas do not have high-speed internet access. However, a staggering

46 percent of American Indian/Alaska Native families in rural areas do not have high-speed home internet access. Meanwhile, nearly one-third of Latino households in rural areas do not have high-speed home internet access compared to only one-quarter in urban areas. Rural families of color also are less likely to have home computers than their urban counterparts as table 1 shows.

Similarly, low-income families in rural areas are less likely to have high-speed internet and computers at home than similar families in urban areas or statewide. Across California, 39 percent of the lowest-income households—those that earn less than \$25,000 annually—do not have high-speed home internet access and about 22 percent do not have a computer. Those percentages are roughly the same in urban locations. However, in rural locations, nearly 45 percent of the lowest-income families do not have home internet access and almost 30 percent do not have a computer.

Meanwhile, among households earning between \$25,000 and \$50,000 annually, only 28 percent each in urban areas and statewide lack home internet access. However, in rural areas more than 40 percent of these families do not have high-speed home internet service and almost 20 percent do not have a computer. Statewide, roughly half of all the children without access to high-speed home internet or computers live in families that earn \$50,000 per year or less, as table 2 shows.

California Can Close Its Homework Gap

During the past year, school districts like CUSD and Buttonwillow have worked tirelessly to ensure their students have the home internet access and devices needed to participate fully in their education during the COVID-19 pandemic. However, the depth of the homework gap and its disproportionate impact on rural families, low-income families, and families of color—as described

in this analysis—indicate that California's schools need additional investments to ensure all children have the high-speed home internet access required for a twenty-first-century education.

Therefore, the Alliance for Excellent Education, Linked Learning Alliance, and Small School Districts' Association urge state lawmakers to use state funds and federal funds allocated to California through the [American Rescue Plan Act](#) to make a one-time \$7 billion investment to expand infrastructure and programs to support high-speed home internet access as proposed in [Governor Gavin Newsom's revised state budget proposal](#). Additionally, the California legislature should pass Assembly Bill 34 to enact the Broadband for All Bond Act of 2022 and allow California voters to approve a \$10 billion general obligation bond in November to expand high-speed internet infrastructure and services in unserved and underserved communities across the state. Finally, the U.S. Congress should provide ongoing funding to the Emergency Broadband Benefit and the Emergency Connectivity Fund to ensure the cost of high-speed home internet and computers does not present a barrier to learning.

COVID-19 did not create California's homework gap. However, if state lawmakers do not take steps now to close this digital divide, students without home internet access and devices will fall even further behind their connected peers long after the pandemic ends. California's students deserve this investment today to ensure their future success.



Photo by Allison Shelley for EDUimages.

TABLE 3: Internet and Device Access in California by City and County

Location	Percentage of Households Without High-Speed Home Internet Access	Number of Children Without High-Speed Home Internet Access	Percentage of Households Without a Computer	Number of Children Without a Computer
Alameda County	12.8%	49,010	6.5%	24,854
Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, and Tuolumne Counties	30.8%	10,448	9.7%	3,288
Butte County	21.2%	9,844	6.0%	2,783
City of Los Angeles	21.9%	170,557	11.3%	88,230
City of Sacramento	16.4%	62,013	5.8%	22,077
City and County of San Francisco	14.1%	16,338	5.2%	6,029
City of San Diego	12.9%	32,261	6.4%	16,024
Colusa, Glenn, Tehama, and Trinity Counties	30.1%	9,326	6.8%	2,114
Contra Costa County	13.3%	38,110	7.2%	20,747
Del Norte, Lassen, Modoc, Plumas, and Siskiyou Counties	34.7%	9,453	12.4%	3,390
El Dorado County	18.9%	7,380	5.1%	1,989
Fresno County	28.2%	75,233	14.4%	38,312
Humboldt County	33.8%	9,539	9.4%	2,658
Imperial County—City of El Centro	26.4%	11,061	14.5%	6,055
Kern County	31.3%	71,318	20.5%	46,636
Kings County	26.1%	10,877	16.6%	6,915
Los Angeles County	20.6%	444,674	8.9%	191,797
Lake and Mendocino Counties	30.8%	8,511	21.2%	5,858
Madera County	39.7%	16,239	21.3%	8,707
Marin County	12.4%	7,366	2.9%	1,729
Merced County	23.7%	17,134	17.2%	12,409
Monterey County	33.6%	39,463	22.8%	26,729
Napa County	21.5%	5,854	4.2%	1,151
Nevada and Sierra Counties	30.1%	6,667	1.6%	356
Orange County	14.4%	100,865	5.3%	36,980

(continued)

TABLE 3: Internet and Device Access in California by City and County (continued)

Location	Percentage of Households Without High-Speed Home Internet Access	Number of Children Without High-Speed Home Internet Access	Percentage of Households Without a Computer	Number of Children Without a Computer
Placer County	9.2%	8,681	2.1%	1,950
Riverside County	16.8%	93,447	7.0%	38,623
San Bernadino County	20.8%	108,367	10.5%	54,738
San Joaquin County	27.1%	54,385	8.7%	17,412
San Mateo County	10.5%	17,659	4.1%	6,972
Santa Cruz County	18.5%	10,350	5.1%	2,855
Santa Barbara County	20.8%	19,488	9.5%	8,896
Santa Clara County	10.2%	46,239	3.4%	15,551
San Diego County	12.2%	89,903	4.7%	34,978
Shasta County	28.9%	12,009	8.6%	3,552
San Luis Obispo City and County	22.8%	11,212	9.3%	4,568
Solano County	18.7%	18,715	5.8%	5,821
Sonoma County	14.4%	8,771	2.6%	1,587
Stanislaus County	22.6%	30,700	11.7%	15,893
Sutter and Yuba Counties	26.9%	11,905	16.9%	7,501
Tulare County	32.2%	43,050	22.0%	29,374
Ventura County	16.7%	30,174	10.1%	18,197
Yolo County	24.3%	11,820	7.3%	3,544
Statewide	18.8%	1,663,600	8.4%	745,572
Nonmetropolitan "Rural" Locations	27.5%	80,336	11.3%	34,160
Metropolitan Locations	18.4%	1,583,264	8.3%	711,413

Source: 2019 American Community Survey

Notes: "High-speed home internet" refers to a wireline broadband internet subscription—high-speed internet service provided via cable, fiber, or digital subscriber line (DSL). "Computer" refers to a laptop, desktop, or tablet computer. "Households" refers to households with one or more children age 17 years or younger.

Endnotes

- ¹ John B. Horrigan, senior fellow at the Technology Policy Institute, conducted the data analysis referenced in this report. To read the full methodology for this analysis, visit <https://all4ed.org/california-homework-gap/>.
- ² For additional information about state efforts to expand students' access to home computers during the pandemic, see S. Johnson and D. J. Willis, "A California Program Spent Millions on Devices for Distance Learning. Here's Where It Went," EdSource, May 14, 2021, <https://edsource.org/2021/a-california-program-spent-millions-on-devices-for-distance-learning-heres-where-it-went/654590>.
- ³ K. Hampton et al., *Broadband and Student Performance Gaps* (East Lansing, MI: James H. and Mary B. Quello Center, Michigan State University, 2020) <https://quello.msu.edu/broadbandgap/>.
- ⁴ Following the U.S. Census Bureau's practice, this analysis defines metropolitan areas as urbanized areas of 50,000 or more people and urban clusters of at least 2,500 people but less than 50,000. Remaining areas are nonmetropolitan. The American Community Survey does not use the term "rural" in characterizing geographies.



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