The COVID-19 pandemic underscored the importance of digital connectivity for learning—while revealing serious inequities in access to broadband and computing devices. For the 2021–22 school year, California has focused on getting as many students as possible back to the classroom. But digital access at home remains essential. As digital tools for learning and teaching become more common, students will increasingly need to access materials and submit assignments online to fully participate in their education.

Unprecedented investments led to sizable gains

The pandemic spurred widespread investments in improving connectivity for students, from major federal programs in broadband affordability and infrastructure to state initiatives that distributed devices and established Wi-fi hotspots. Drawing on survey data from the US Census Bureau, our findings show that among California households with schoolchildren:

- Device access rose dramatically early in the pandemic. Gains were greatest for low-income households, households without a bachelor’s degree, and Black and Latino households.
- Improvements in internet access were more modest. Gains were strongest among low-income households and households without a bachelor’s degree.
- Progress stalled in spring 2021, and major equity gaps remain. Forty-one percent of low-income households still do not have full digital access (i.e., access to both the internet and a device); neither do 37 percent of Latino households and 29 percent of Black households.

For California students, reliable internet access at home lags behind device access

![Graph showing device access, internet access, and internet + device access for schoolchildren from Spring 2020 to Spring 2021]

Source: Authors’ calculations using Census Bureau Household Pulse Survey data, 2020–2021.
Local innovations offer models for closing the remaining gaps

Affordability and lack of infrastructure are the key barriers to universal broadband access. For districts that want to capitalize on recent federal and state funding, local efforts to address the digital divide prior to the pandemic offer a roadmap.

These efforts show how diverse districts can ensure students have internet access at home—often by providing connectivity to the broader community. For instance, in Imperial County, K–12 school districts are part of a large collaborative of public agencies and institutions that share a fiber-optic network. The county office of education has also launched a pilot program that provides high-speed internet to students off campus. In the Central Valley, Fresno Unified School District has deployed a private LTE network to provide wireless connectivity to students in the southern region of Fresno, where there are fewer towers from cellular carriers.

How can we achieve digital equity?

In summer 2020, Governor Newsom signed an executive order calling for a Broadband Action Plan, which identifies critical steps to achieve affordable broadband and devices for all Californians. To support this goal, we recommend the following:

**Improve broadband mapping.** Detailed data on how many and which students have access to reliable internet remains limited. Federal and state governments have announced efforts to improve data collection and develop more-granular mapping tools, and schools could play an important role in collecting data on actual usage and speed.

**Provide annual reports on student access to the internet.** The state should consider directing schools and districts to report broadband access—both in school and at home—as part of its accountability efforts. For example, such information could be included in Local Control Accountability Plans or School Accountability Report Cards.

**Assess the need for continued subsidies.** Federal pandemic relief provided much-needed internet subsidies for low-income households. Congress is currently discussing an infrastructure package that could renew these temporary programs. The state should assess the need for continued subsidies and develop recommendations for the best path forward if or when federal subsidies expire.

**Coordinate efforts among federal, state, and local stakeholders.** The state and the philanthropic community should consider developing an innovation network to share knowledge from local programs that have successfully provided home internet access to students. Service providers, public and private agencies, and community organizations will need to work together to leverage funding opportunities and scale up effective innovations.

Adapted by Vicki Hsieh, from Achieving Digital Equity for California’s Students by Joseph Hayes and Niu Gao (PPIC, 2021). Supported with funding from the Michelson 20MM Foundation.