

Coronavirus Squeezes Supply of Chromebooks, iPads, and Other Digital Learning Devices

On a recent morning in late March, Mark Racine, the chief technology officer for the Boston Public Schools, is huffing and puffing after bringing out a huge pallet of brand-new Chromebooks for volunteers to deliver to families across the city.

It's part of a massive initiative to quickly distribute 20,000 laptops to Boston K-12 students, each device purchased weeks earlier in response to a widening coronavirus outbreak that, at the time, had yet to shut down most of the nation's schools indefinitely.

Early in March, officials realized they'd have to get more computers in the hands of students to use at home, said Racine, noting the plan was to make use of available laptops the district already owned. But as the disease tightened its grip, upending daily life for hundreds of millions of people domestically, the district shifted to plan for a prolonged closure. New devices would need to be acquired—a lot of devices.

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By then, the 55,000-student district's laptop vendor had a stark message: Place an order now or other large districts are going to quickly buy up all remaining inventory.

"Everybody is fighting for them," said Racine about the current crush in demand for new devices among K-12 schools. "We had some districts reach out to us and say, 'Can we buy some off of you?"

The scene from Boston—pandemic-induced district technology acquisitions highlighted by a plethora of new mobile devices that need to be distributed in a flash to support on-the-fly remote learning strategies—is unfolding across the country.

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Chromebooks, the device of choice for most school districts, along with other laptops and tablets, are in short supply, according to analysts.

The uptick in school district device purchases comes as the Chinese-based supply chain that builds mobile computers and electronic components has yet to fully recover from a coronavirus wave that ravaged its country for months earlier this year.

And with some form of remote learning being implemented on the spot by schools nationwide for the first time, the largest districts are buying up inventory in huge numbers.

Chicago Public Schools is in the process of purchasing 37,000 new devices. In Los Angeles, district officials bought "Chromebook-like" laptops to address an estimated shortage of 150,000 take-home computers for students.

And district officials in New York City, home to the largest school system in the country, moved quickly in recent weeks to secure 300,000 new iPads. The first batch of 25,000 iPads was delivered to low-income students last week. Another 50,000 tablets will be delivered by Apple and T-Mobile this week and every week after, a district spokesperson said.

Smaller Districts Struggle to Compete

Meanwhile, some smaller and rural districts are having problems getting orders fulfilled.

The resulting logjam for mobile devices that some school officials are experiencing is unprecedented, said Todd Riker, the chief technology officer for the 11,250-student Metropolitan School District of Pike Township in Indiana.

Riker's district, just outside of Indianapolis, needs about 950 devices to fill an equity gap now that more students will need take-home computers to complete lessons. The district placed an order during the first week of March for new Chromebooks, replacements for older laptops currently wired in carts at schools. But Riker said he can't get a vendor to commit to a delivery date because of supply issues caused by the coronavirus.

Comparing the lack of Chromebook stock to another product shortage afflicting masses during the COVID-19 pandemic—toilet paper—he said, "it feels like there's not a Chromebook to be found."

"It's as if there isn't a single square of tissue available. Except it's Chromebooks," Riker said. "It feels like the upheaval has happened in the supply chain overnight."

Through a listsery with other district tech officials from Indiana, Riker said he's seen that some have been able to "accelerate delivery timelines" on mobile device purchases. However, most are currently dealing with the same challenge as his district.

"We're competing monetarily and in the supply chain with districts like Los Angeles, New York City, and Houston," he said, "so it's a bit of a challenge."

Purchasing Frustrations Ahead

Normally, sales for K-12 devices peak in the second and third quarters when school officials attend education tech trade shows and begin to finalize their district budgets, buying the bulk of their gadgets between April and July to have ready for the start of a new school year. In this case, the market ramped up to "100 percent overnight" and an already compromised supply chain wasn't prepared for the jolt, said Lauren Guenveu, a senior research analyst who specializes in devices at technology market tracker IDC.

While the supply chain in China is making progress toward recovery, there is still a general shortage of device components such as panels, displays, and circuit boards, she said. That is expected to persist through at least May, maybe longer.

"As a result, K-12 is largely going to struggle to fulfill their needs through much of the second quarter of the year," said Guenveu, noting that increased demand for Chromebooks and other devices driven by a work-from-home bump should slow if fears of a recession continue. But "these school district orders are going to keep coming."

Entering 2020, device inventory for the K-12 sector was more abundant than in previous years, according to IDC, but that is now running "extremely low," said Guenveu.

"There are just no units to replace that inventory with right now," she said.

However, Guenveu noted some of the larger districts have been able to fulfill technology needs. That's due in large part to being able to flex procurement muscle via purchasing power. In addition, she said, that some of the biggest states, New York and California in particular, were among the first hit hard by the coronavirus, requiring district officials to react earlier.

"The larger districts have more money to throw around, so I imagine there is a bit of a bidding war going on," she said. "The more purchasing power you have the more likely you are to be able to fulfill those units."

'We're In Limbo'

David Wick, the principal of Columbia Falls Junior High School in Montana and president of the National Association of Elementary School Principals, said districts already have to prepare for unplanned expenses stemming from new technology purchases caused by the pandemic. Now, there's the additional headache of dealing with delays because of demand.

The Columbia Falls School District recently approached a device provider for an order of 300 Chromebooks and was told to expect shipment toward the end of April.

"We're in the process of ordering right now to try and get those devices as soon as we can," Wick said of the 2,100-student district in Northwestern Montana. "But if the demand is great and if a large urban area eats up a bunch of the stock, then how far behind do you think the rural areas are going to be?"

When the Coffee County School District in rural Georgia, about 3½ hours south of Atlanta, started accepting solicitations in March for 450 Chromebooks, some vendors decided not to bid, said Chandler Newell, the district's technology director.

"There was a lot of concern about being able to deliver," he said. "It's still uncertain when we'd be able to accept delivery of the units, so we're in limbo."

But Newell is confident the 7,800-student district will get new laptops. He said vendors are still sending marketing emails daily, so he believes "there's some devices out there." Whether the available inventory will be the exact devices the district is looking for—14-inch HP Chromebooks—is another question.

"We were told there are a number of those in the U.S. already awaiting allocation and shipment." he said. "It's not known if the ones we would like to purchase are in that lot. We expect to find out in the next couple of weeks."

In Boston, Racine, the district's CTO, said most of the 20,000 new laptops acquired for coronavirus closures had already been distributed to students as of last week. To get those devices quickly, the district had to make some compromises. Months of prepping for an eventual shift to 1-to-1 computing already included decisions about device selection. But, Racine said, the district had to "throw those plans out the door to choose what was available right now."

"We had to make some adjustments. We weren't buying the right [devices]. We were buying what was available," he said. "Those decisions were made to get the devices in the hands of our kids as soon as possible."