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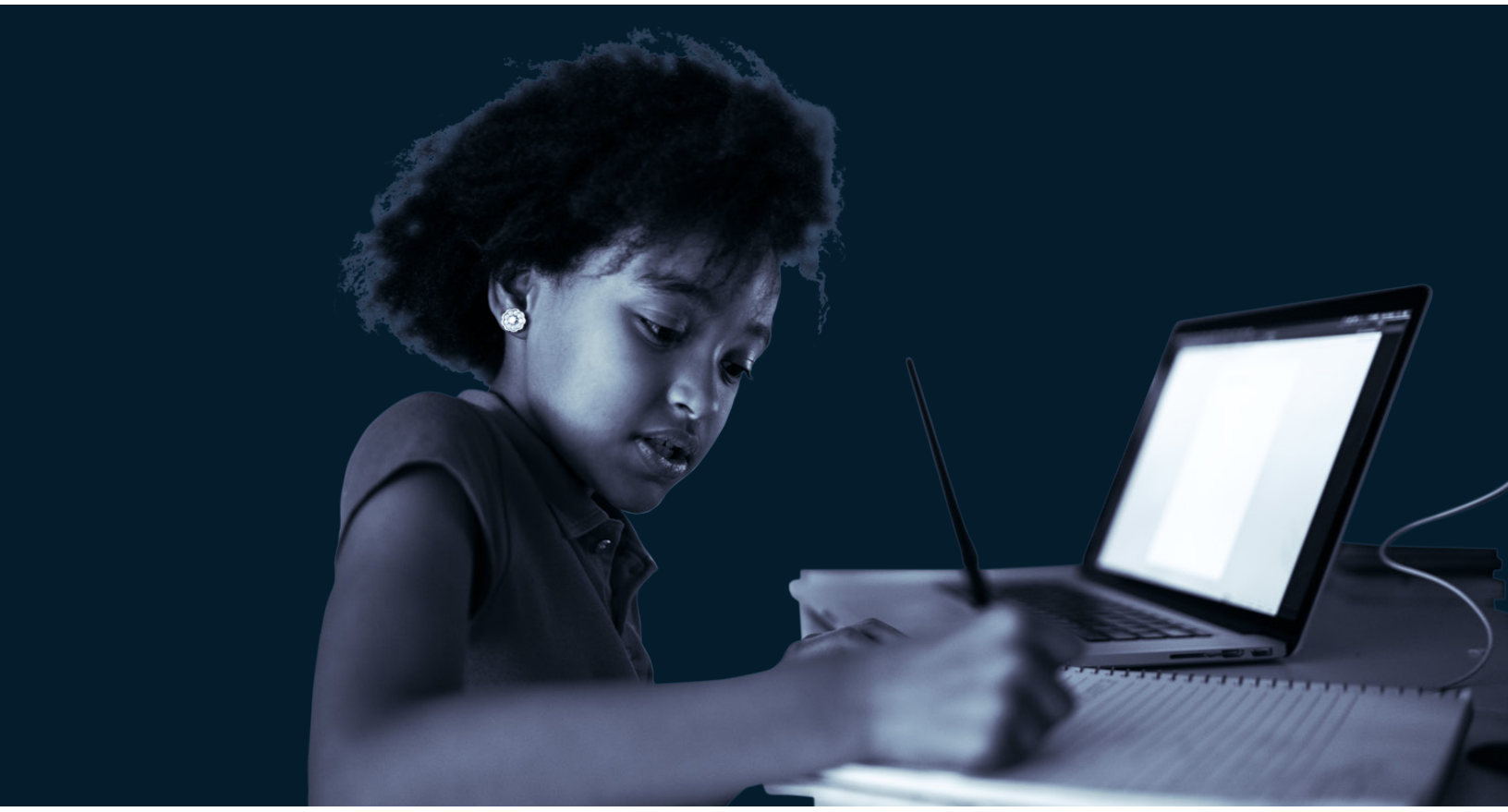
COVID-19 and education: The lingering effects of unfinished learning

US states and districts have the opportunity to not only help students catch up on unfinished learning from the pandemic but also tackle long-standing historical inequities in education.

by Emma Dorn, Bryan Hancock, Jimmy Sarakatsannis, and Ellen Viruleg



July 2021

As this most disrupted of school years draws to a close, it is time to take stock of the impact of the pandemic on student learning and well-being. Although the 2020–21 academic year ended on a high note—with rising vaccination rates, outdoor in-person graduations, and access to at least some in-person learning for 98 percent of students—it was as a whole perhaps one of the most challenging for educators and students in our nation's history.[1]

Our analysis shows that the impact of the pandemic on K–12 student learning was significant, leaving students on average five months behind in mathematics and four months behind in reading by the end of the school year. The pandemic widened preexisting opportunity and achievement gaps, hitting historically disadvantaged students hardest. In math, students in majority Black schools ended the year with six months of unfinished learning, students in low-income schools with seven. High schoolers have become more likely to drop out of school, and high school seniors, especially those from low-income families, are less likely to go on to postsecondary education. And the crisis had an impact on not just academics but also the broader health and well-being of students, with more than 35 percent of parents very or extremely concerned about their children's mental health.

The fallout from the pandemic threatens to depress this generation's prospects and constrict their opportunities far into adulthood. The ripple effects may undermine their chances of attending college and ultimately finding a fulfilling job that enables them to support a family. Our analysis suggests that, unless steps are taken to address unfinished learning, today's students may earn $49,000 to $61,000 less over their lifetime owing to the impact of the pandemic on their schooling. The impact on the US economy could amount to $128 billion to $188 billion every year as this cohort enters the workforce.

Federal funds are in place to help states and districts respond, though funding is only part of the answer. The deep-rooted challenges in our school systems predate the pandemic and have resisted many reform efforts. States and districts have a critical role to play in marshaling that funding into sustainable programs that improve student outcomes. They can ensure rigorous implementation of evidence-based initiatives, while also piloting and tracking the impact of innovative new approaches. Although it is too early to fully assess the effectiveness of postpandemic solutions to unfinished learning, the scope of action is already clear. The immediate imperative is to not only reopen schools and recover unfinished learning but also reimagine education systems for the long term. Across all of these priorities it will be critical to take a holistic approach, listening to students and parents and designing programs that meet academic and nonacademic needs alike.

What have we learned about unfinished learning?

As the 2020–21 school year began, just 40 percent of K–12 students were in districts that offered any in-person instruction. By the end of the year, more than 98 percent of students had access to some form of in-person learning, from the traditional five days a week to hybrid models. In the interim, districts oscillated among virtual, hybrid, and in-person learning as they balanced the need to keep students and staff safe with the need to provide an effective learning environment. Students faced multiple schedule changes, were assigned new teachers midyear, and struggled with glitchy internet connections and Zoom fatigue. This was a uniquely challenging year for teachers and students, and it is no surprise that it has left its mark—on student learning, and on student well-being.

As we analyze the cost of the pandemic, we use the term "unfinished learning" to capture the reality that students were not given the opportunity this year to complete all the learning they would have completed in a typical year. Some students who have disengaged from school altogether may have slipped backward, losing knowledge or skills they

[1] "Burbio's K-12 school opening tracker," Burbio, accessed May 31, 2021, cai.burbio.com. By the end of the school year, only 2 percent of students were in virtual-only districts. Many students, however, chose to keep learning virtually in districts that were offering hybrid or fully in-person learning.

Students testing in 2021 were about ten points behind in math and nine points behind in reading, compared with matched students in previous years.

once had. The majority simply learned less than they would have in a typical year, but this is nonetheless important. Students who move on to the next grade unprepared are missing key building blocks of knowledge that are necessary for success, while students who repeat a year are much less likely to complete high school and move on to college. And it's not just academic knowledge these students may miss out on. They are at risk of finishing school without the skills, behaviors, and mindsets to succeed in college or in the workforce. An accurate assessment of the depth and extent of unfinished learning will best enable districts and states to support students in catching up on the learning they missed and moving past the pandemic and into a successful future.

Unfinished learning is real—and inequitable

To assess student learning through the pandemic, we analyzed Curriculum Associates' i-Ready in-school assessment results of more than 1.6 million elementary school students across more than 40 states.[2] We compared students' performance in the spring of 2021 with the performance of similar students prior to the pandemic.[3] Students testing in 2021 were about ten points behind in math and nine points behind in reading, compared with matched students in previous years.

To get a sense of the magnitude of these gaps, we translated these differences in scores to a more intuitive measure—months of learning. Although there is no perfect way to make this translation, we can get a sense of how far students are behind by comparing the levels students attained this spring with the growth in learning that usually occurs from one grade level to the next. We found that this cohort of students is five months behind in math and four months behind in reading, compared with where we would expect them to be based on historical data.[4]

Unfinished learning did not vary significantly across elementary grades. Despite reports that remote learning was more challenging for early elementary students,[5] our results suggest the impact was just as meaningful for older elementary students.[6] We can hypothesize that perhaps younger elementary students received more help from parents and older siblings, and that older elementary students were more likely to be struggling alone.

[2] The Curriculum Associates in-school sample consisted of 1.6 million K–6 students in mathematics and 1.5 million in reading. The math sample came from all 50 states, but 23 states accounted for 90 percent of the sample. The reading sample came from 46 states, with 21 states accounting for 90 percent of the sample. Florida accounted for 29 percent of the math and 30 percent of the reading sample. In general, states that had reopened schools are overweighted given the in-school nature of the assessment.

[3] Specifically, we compared spring 2021 results to those of historically matched students in the springs of 2019, 2018, and 2017.

[4] The conversion into months of learning compares students' achievement in the spring of one grade level with their performance in the spring of the next grade level, treating this spring-to-spring difference in historical scores as a "year" of learning. It assumes a ten-month school year with a two-month summer vacation. Actual school schedules vary significantly, and i-Ready's typical growth numbers for a "year" of learning are based on 30 weeks of actual instruction between the fall and the spring rather than on a spring-to-spring calendar-year comparison.

[5] Marva Hinton, "Why teaching kindergarten online is so very, very hard," Edutopia, October 21, 2020, edutopia.org.

[6] While our analysis only includes results from students who tested in-school in the spring, many of these students were learning remotely for meaningful portions of the fall and the winter.

It is also worth remembering that our numbers capture the "average" progress by grade level. Especially in early reading, this average can conceal a wide range of outcomes. Another way of cutting the data looks instead at which students have dropped further behind grade levels. A recent report suggests that more first and second graders have ended this year two or more grade levels below expectations than in any previous year.[7] Given the major strides children at this age typically make in mastering reading, and the critical importance of early reading for later academic success, this is of particular concern.

While all types of students experienced unfinished learning, some groups were disproportionately affected. Students of color and low-income students suffered most. Students in majority-Black schools ended the school year six months behind in both math and reading, while students in majority-white schools ended up just four months behind in math and three months behind in reading.[8] Students in predominantly low-income schools and in urban locations also lost more learning during the pandemic than their peers in high-income rural and suburban schools (Exhibit 1).

In fall 2020, we projected that students could lose as much as five to ten months of learning in mathematics, and about half of that in reading, by the end of the school year. Spring assessment results came in toward the lower end of these projections, suggesting that districts and states were able to improve the quality of remote and hybrid learning through the 2020–21 school year and bring more students back into classrooms.

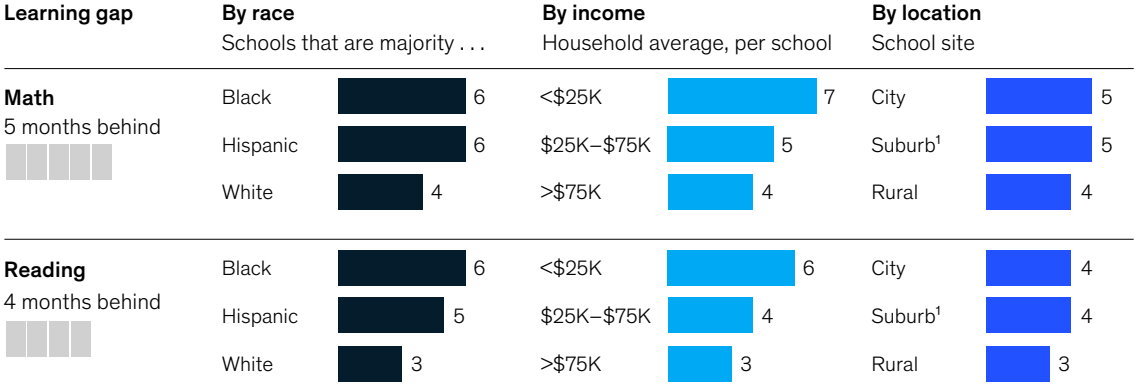
Indeed, if we look at the data over time, some interesting patterns emerge.[9] Taking math as an example, as schools closed their buildings in

[7] *Academic achievement at the end of the 2020–2021 school year*, Curriculum Associates, June 2021, curriculumassociates.com.
[8] To respect students' privacy, we cannot isolate the race or income of individual students in our sample, but we can look at school-level demographics.
[9] The composition of the fall student sample was different from that of the spring sample, because more students returned to in-person assessments in the spring. Some of the increase in unfinished learning from fall to spring could be because the spring assessment included previously virtual students, who may have struggled more during the school year. Even so, the spring data are the best reflection of unfinished learning at the end of the school year.

Exhibit 1

By the end of the 2020–21 school year, students were on average five months behind in math and four months behind in reading.

Cumulative months of unfinished learning due to the pandemic by type of school, grades 1 through 6



[1]Town or suburb.
Source: Curriculum Associates i-Ready assessment data

the spring of 2020, students fell behind rapidly, learning almost no new math content over the final few months of the 2019–20 school year. Over the summer, we assume that they experienced the typical "summer slide" in which students lose some of the academic knowledge and skills they had learned the year before. Then they resumed learning through the 2020–21 school year, but at a slower pace than usual, resulting in five months of unfinished learning by the end of the year (Exhibit 2).[10]

In reading, however, the story is somewhat different. As schools closed their buildings in March 2020, students continued to progress in reading, albeit at a slower pace. During the summer, we assume that students' reading level stayed roughly flat, as in previous years. The pace of learning increased slightly over the 2020–21 school year, but the difference was not as great as it was in math, resulting in four months of unfinished learning by the end of the school year (Exhibit 3). Put another way, the initial shock in reading was less severe, but the improvements to remote and hybrid learning seem to have had less impact in reading than they did in math.

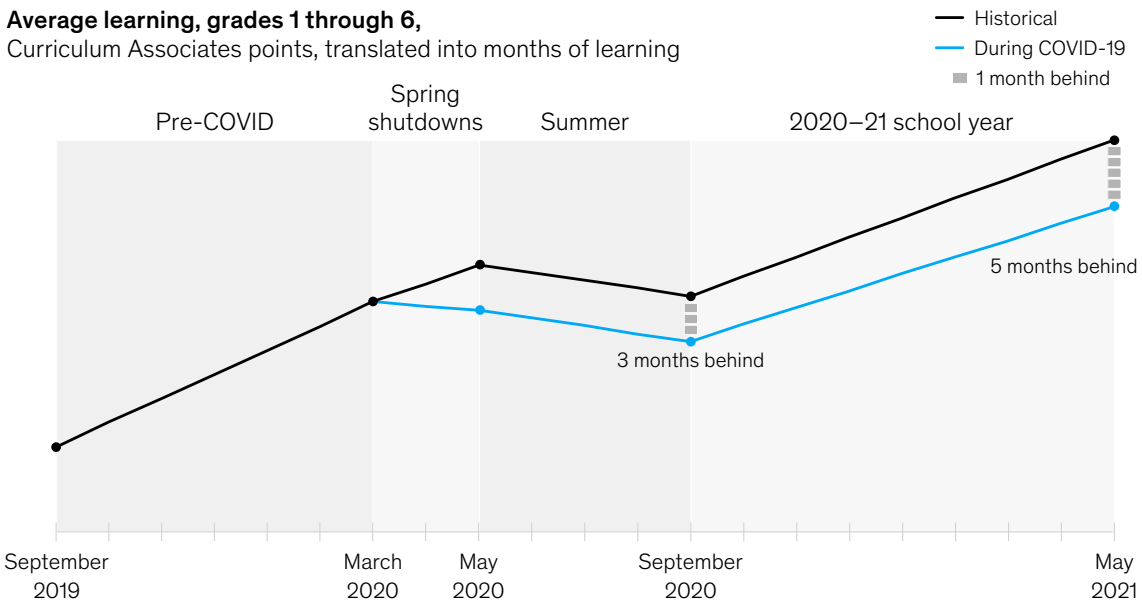
Before we celebrate the improvements in student trajectories between the initial school shutdowns and the subsequent year of learning, we should remember that these are still sobering numbers. On average, students who took the spring assessments in school are half a year behind in math, and nearly that in reading. For Black and Hispanic students, the losses are not only greater but also piled on top of historical inequities in opportunity and achievement (Exhibit 4).

Furthermore, these results likely represent an optimistic scenario. They reflect outcomes for students who took interim assessments in the

[10] These lines simplify the pattern of typical learning through the year. In a typical year, students learn more in the fall and less in the spring, and only learn during periods of instruction (the chart includes the well-documented learning loss that happens during the summer, but does not include shorter holidays when students are not in school receiving instruction).

Exhibit 2

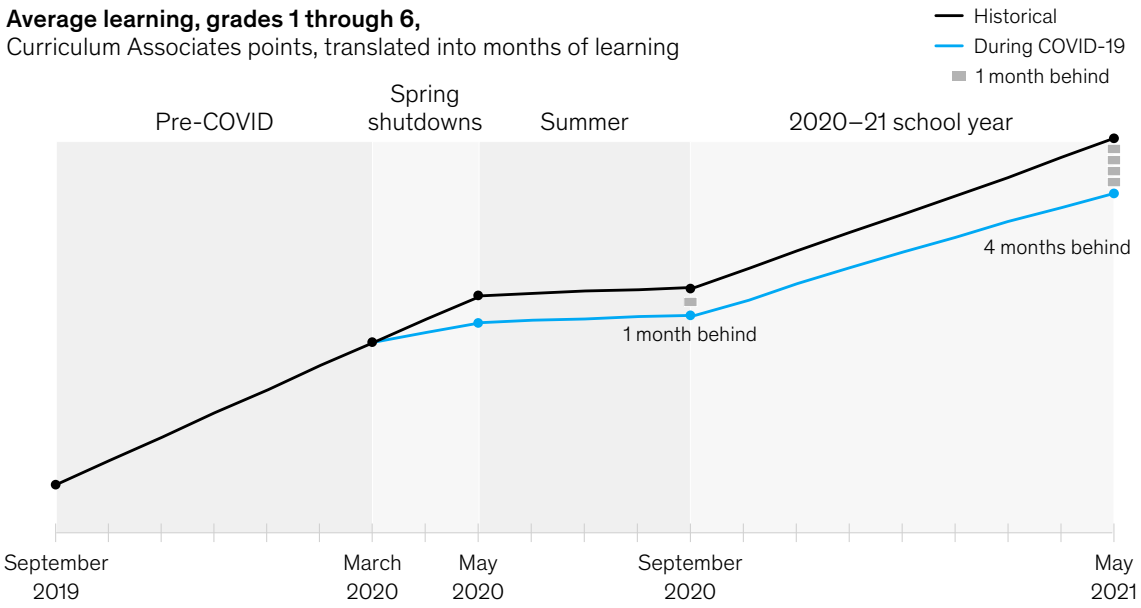
The initial shock was especially severe in math, with students learning little, if anything, during the initial spring shutdowns.



Source: Curriculum Associates i-Ready assessment data

Exhibit 3

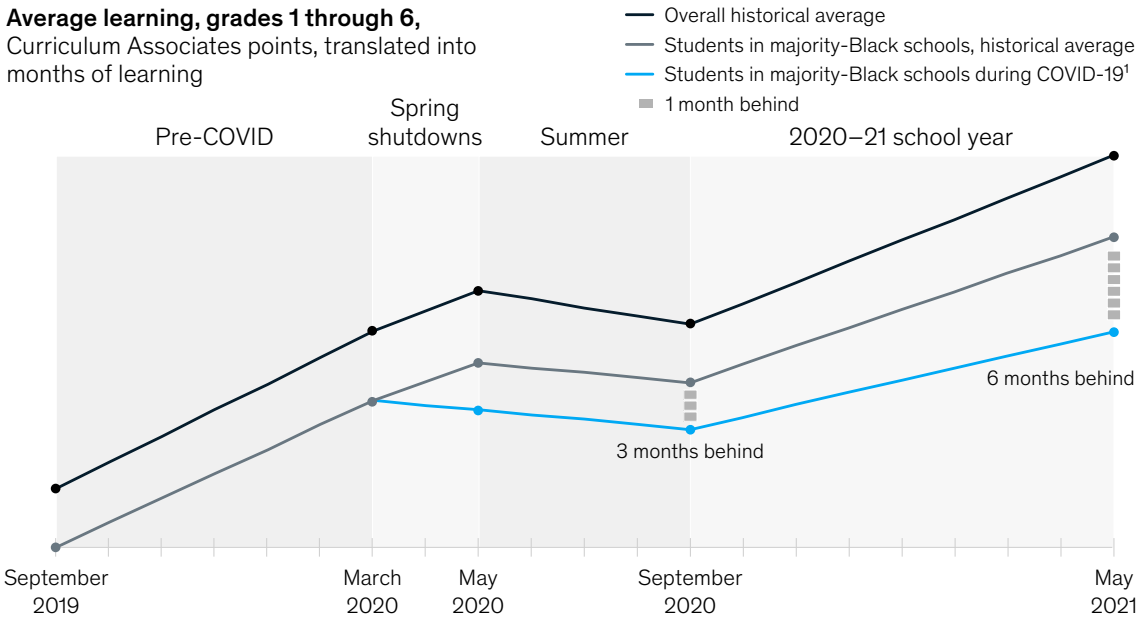
The initial shock was less severe in reading, but losses continued to build up over the 2020–21 school year.



Source: Curriculum Associates i-Ready assessment data

Exhibit 4

Unfinished learning through the pandemic exacerbates historical inequities, especially for Black students.



[1]Average fall 2020 achievement and learning loss represents schools with students who are >50% Black, Indigenous, and people of color because there were not enough majority-Black schools that had in-school assessments; average spring 2020 achievement and learning loss represents schools with >50% Black enrollment.
Source: Curriculum Associates i-Ready assessment data

spring in a school building[11]—and thus exclude students who remained remote throughout the entire school year, and who may have experienced the most disruption to their schooling.[12] The Curriculum Associates data cover a broad variety of schools and states across the country, but are not fully representative, being overweighted for rural and southeastern states that were more likely to get students back into the classrooms this year. Finally, these data cover only elementary schools. They are silent on the academic impact of the pandemic for middle and high schoolers. However, data from school districts suggest that, even for older students, the pandemic has had a significant effect on learning.[13]

The harm inflicted by the pandemic goes beyond academics

Students didn't just lose academic learning during the pandemic. Some lost family members; others had caregivers who lost their jobs and sources of income; and almost all experienced social isolation.

These pressures have taken a toll on students of all ages. In our recent survey of 16,370 parents across every state in America, 35 percent of parents said they were very or extremely concerned about their child's mental health, with a similar proportion worried about their child's social and emotional well-being. Roughly 80 percent of parents had some level of concern about their child's mental health or social and emotional health and development since the pandemic began. Parental concerns about mental health span grade levels but are slightly lower for parents of early elementary school students.[14]

Parents also report increases in clinical mental health conditions among their children, with a five-percentage-point increase in anxiety and a six-percentage-point increase in depression. They also report increases in behaviors such as social withdrawal, self-isolation, lethargy, and irrational fears (Exhibit 5). Despite increased levels of concern among parents, the amount of mental health assessment and testing done for children is 6.1 percent lower than it was in 2019—the steepest decline in assessment and testing rates of any age group.[15]

Broader student well-being is not independent of academics. Parents whose children have fallen significantly behind academically are one-third

[11] Students who took the assessment out of school are not included in our sample because we could not guarantee fidelity and comparability of results, given the change in the testing environment. Out-of-school students represent about a third of the students taking i-Ready assessments in the spring, and we will not have an accurate understanding of the pandemic's impact on their learning until they return to school buildings, likely in the fall.

[12] Initial results from Texas suggest that districts with mostly virtual instruction experienced more unfinished learning than those with mostly in-person instruction. The percent of students meeting math expectations dropped 32 percent in mostly virtual districts but just 9 percent in mostly in-person ones. See Reese Oxner, "Texas students' standardized test scores dropped dramatically during the pandemic, especially in math," *Texas Tribune*, June 28, 2021, texastribune.org.

[13] For example, in Salt Lake City, the percentage of middle and high school students failing a class jumped by 60 percent, from 2,500 to 4,000, during the pandemic. To learn about increased failure rates across multiple districts from the Bay Area to New Mexico, Austin, and Hawaii, see Richard Fulton, "Failing Grades," *Inside Higher Ed*, March 8, 2021, insidehighered.com.

[14] While 30.7% percent of all K–2 parents were very or extremely concerned, a peak of 37.6% percent of eighth-grade parents were.

[15] Vulnerable Populations: Data Over Time, McKinsey Center for Societal Benefit through Healthcare, August 2021, McKinsey.com.

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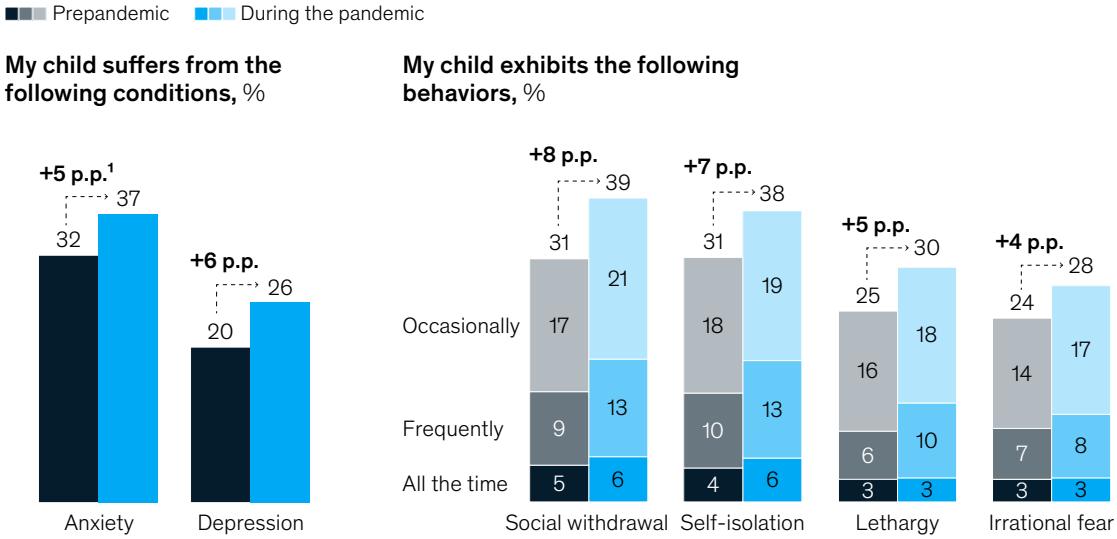
Exhibit 5

Parents reported increases in mental health conditions and concerning behaviors in their children.



Note: Figures may not sum to totals, because of rounding.
[1]Percentage points.
Source: McKinsey survey of 16,370 parents across all 50 states

more likely to say that they are very or extremely concerned about their children's mental health. Black and Hispanic parents are seven to nine percentage points more likely than white parents to report higher levels of concern. Unaddressed mental-health challenges will likely have a knock-on effect on academics going forward as well. Research shows that trauma and other mental-health issues can influence children's attendance, their ability to complete schoolwork in and out of class, and even the way they learn.[16]

The impact of unfinished learning on diminished student well-being seems to be playing out in the choices that students are making. Some students have already effectively dropped out of formal education entirely.[17] Our parent survey suggests that chronic absenteeism for eighth through 12th graders has increased by 12 percentage points, and 42 percent of the students who are new to chronic absenteeism are attending no school at all, according to their parents. Scaled up to the national level, this suggests that 2.3 million to 4.6 million additional eighth- to 12th-grade students were chronically absent from school this year, in addition to the 3.1 million who are chronically absent in nonpandemic years. State and district data on chronic absenteeism are still emerging, but data released so far also suggest a sharp uptick in absenteeism rates nationwide, particularly in higher grades.[18] According to emerging state and district data, increases in chronic absenteeism are highest among populations with historically low rates. This is reflected also in our survey results. Black students,

[16] Satu Larson et al., "Chronic childhood trauma, mental health, academic achievement, and school-based health center mental health services," *Journal of School Health*, 2017, 87(9), 675–86, escholarship.org.
[17] To assess the impact of the pandemic on dropout rates, we have to look beyond official enrollment data, which are only published annually, and which only capture whether a child has enrolled at the beginning of the year, not whether they are engaged and attending school. Chronic absenteeism rates provide clues as to which students are likely to persist in school and which students are at risk of dropping out.
[18] A review of available state and district data, including data released by 14 states and 11 districts, showed increases in chronic absenteeism of between three and 16 percentage points, with an average of seven percentage points. However, many states changed the definition of absenteeism during the pandemic, so a true like-for-like comparison is difficult to obtain.

with the highest historical absenteeism rates, saw more modest increases during the pandemic than white or Hispanic students (Exhibit 6).

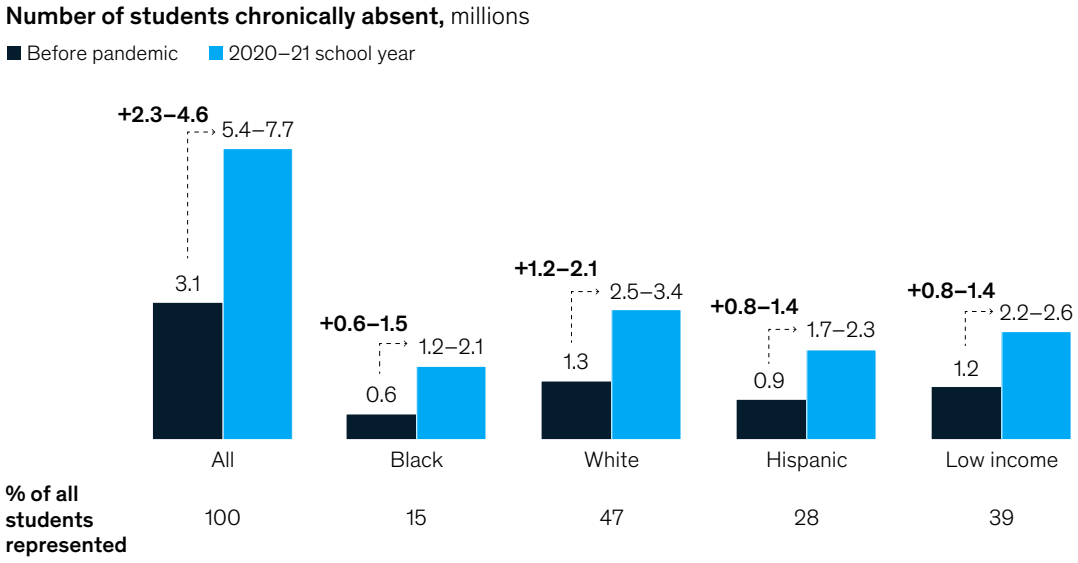
It remains unclear whether these pandemic-related chronic absentees will drop out at rates similar to those of students who were chronically absent prior to the pandemic. Some students could choose to return to school once in-person options are restored; but some portion of these newly absent students will likely drop out of school altogether. Based on historical links between chronic absenteeism and dropout rates, as well as differentials in absenteeism between fully virtual and fully in-person students, we estimate that an additional 617,000 to 1.2 million eighth–12th graders could drop out of school altogether because of the pandemic if efforts are not made to reengage them in learning next year.[19]

Even among students who complete high school, many may not fulfill their dreams of going on to postsecondary education. Our survey suggests that 17 percent of high school seniors who had planned to attend postsecondary education abandoned their plans—most often because they had joined or were planning to join the workforce or because the costs of college were too high. The number is much higher among low-income high school seniors, with 26 percent abandoning their plans. Low-income seniors are more likely to state cost as a reason, with high-income seniors more likely to be planning to reapply the following year or enroll in a gap-year program. This is consistent

[19] The federal definition of chronic absenteeism is missing more than 15 days of school each year. According to the Utah Education Policy Center's research brief on chronic absenteeism, the overall correlation between one year of chronic absence between eighth and 12th grade and dropping out of school is 0.134. For more, see Utah Education Policy Center, *Research brief: Chronic absenteeism*, July 2012, uepc.utah.edu. We then apply the differential in chronic absenteeism between fully virtual and fully in-person students to account for virtual students reengaging when in-person education is offered. For students who were not attending school at all, we assumed that 50 to 75 percent would not return to learning. This estimation is partly based on *The on-track indicator as a predictor of high school graduation* from the UChicago Consortium on School Research, which estimates that up to 75 percent of high school students who are "off track"—either failing or behind in credits—do not graduate in five years. For more, see Elaine Allensworth and John Q. Easton, *The on-track indicator as a predictor of high school graduation*, UChicago Consortium on School Research, 2005, consortium.uchicago.edu.

Exhibit 6

Absenteeism among students in eighth through 12th grade increased significantly during the pandemic.



Source: McKinsey survey of 16,370 parents across all 50 states

with National Student Clearinghouse reports that show overall college enrollment declines, with low-income, high-poverty, and high-minority high schools disproportionately affected.[20]

Unfinished learning has long-term consequences

The cumulative effects of the pandemic could have a long-term impact on an entire generation of students. Education achievement and attainment are linked not only to higher earnings but also to better health, reduced incarceration rates, and greater political participation.[21] We estimate that, without immediate and sustained interventions, pandemic-related unfinished learning could reduce lifetime earnings for K–12 students by an average of $49,000 to $61,000. These costs are significant, especially for students who have lost more learning. While white students may see lifetime earnings reduced by 1.4 percent, the reduction could be as much as 2.4 percent for Black students and 2.1 percent for Hispanic students.[22]

Lower earnings, lower levels of education attainment, less innovation—all of these lead to decreased economic productivity. By 2040 the majority of this cohort of K–12 students will be in the workforce. We anticipate a potential annual GDP loss of $128 billion to $188 billion from pandemic-related unfinished learning.[23]

This increases by about one-third the existing hits to GDP from achievement gaps that predated COVID-19. Our previous research indicated that the pre-COVID-19 racial achievement gap was equivalent to $426 billion to $705 billion in lost economic potential every year (Exhibit 7).[24]

What is the path forward for our nation's students?

There is now significant funding in place to address these critical issues. Through the Coronavirus Aid, Relief, and Economic Security Act (CARES Act); the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA); and the American Rescue Plan (ARP), the federal government has already committed more than $200 billion to K–12 education over the next three years,[25] a significant increase over the approximately $750 billion spent annually on public schooling.[26] The majority of these funds are routed through the Elementary and Secondary School Emergency Relief Fund (ESSER), of which 90 percent flows to districts and 10 percent to state education agencies. These are vast sums of money, particularly in historical context. As part of the 2009 American Recovery and Reinvestment Act (ARRA), the Obama administration committed more than $80 billion toward K–12 schools—at the time the biggest federal infusion of funds to public schools in the nation's history.[27] Today's funding more than

[20] Todd Sedmak, "Fall 2020 college enrollment update for the high school graduating class of 2020," National Student Clearinghouse, March 25, 2021, studentclearinghouse.org; Todd Sedmak, "Spring 2021 college enrollment declines 603,000 to 16.9 million students," National Student Clearinghouse, June 10, 2021, studentclearinghouse.org.

[21] See, for example, Michael Grossman, "Education and nonmarket outcomes," in *Handbook of the Economics of Education, Volume 1*, ed. Eric Hanushek and Finis Welch (Amsterdam: Elsevier, 2006), 577–633; Lance Lochner and Enrico Moretti, "The effect of education on crime: Evidence from prison inmates, arrests, and self-reports," *American Economic Review*, 2004, Volume 94, Number 1, pp. 155–89; Kevin Milligan, Enrico Moretti, and Philip Oreopoulos, "Does education improve citizenship? Evidence from the United States and the United Kingdom," *Journal of Public Economics*, August 2004, Volume 88, Number 9–10, pp. 1667–95; and *Education transforms lives*, UNESCO, 2013, unesdoc.unesco.org.

[22] Projected earnings across children's lifetimes using current annual incomes for those with at least a high school diploma, discounting the earnings by a premium established in Murnane et al., 2000, which tied cognitive skills and future earnings. See Richard J. Murnane et al., "How important are the cognitive skills of teenagers in predicting subsequent earnings?," *Journal of Policy Analysis and Management*, September 2000, Volume 19, Number 4, pp. 547–68.

[23] Using Hanushek and Woessmann 2008 methodology to map national per capita growth associated with decrease in academic achievement, then adding additional impact of pandemic dropouts on GDP. For more, see Eric A. Hanushek and Ludger Woessmann, "The role of cognitive skills in economic development," *Journal of Economic Literature*, September 2008, Volume 46, Number 3, pp. 607–68.

[24] This is the increase in GDP that would result if Black and Hispanic students achieved the same levels of academic performance as white students. For more information on historical opportunity and achievement gaps, please see Emma Dorn, Bryan Hancock, Jimmy Sarakatsannis, and Ellen Viruleg, "COVID-19 and student learning in the United States: The hurt could last a lifetime," June 1, 2020, McKinsey.com.

[25] The CARES Act provided $13 billion to ESSER and $3 billion to the Governor's Emergency Education Relief (GEER) Fund; CRRSAA provided $54 billion to ESSER II, $4 billion to Governors (GEER II and EANS); ARP provided $123 billion to ESSER III, $3 billion to Governors (EANS II), and $10 billion to other education programs. For more, see "CCSSO fact sheet: COVID-19 relief funding for K-12 education," Council of Chief State School Officers, 2021, https://753a0706.flowpaper.com/CCSSOCovidReliefFactSheet/#page=2.

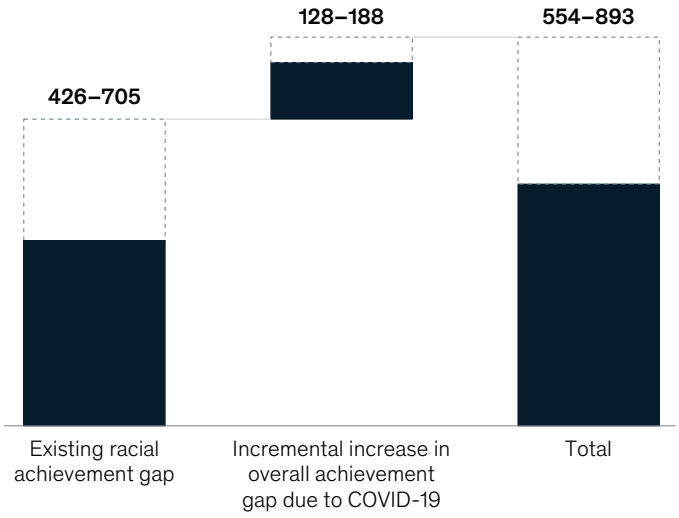
[26] "The condition of education 2021: At a glance," National Center for Education Statistics, accessed June 30, 2021, nces.ed.gov.

[27] "The American Recovery and Reinvestment Act of 2009: Saving and Creating Jobs and Reforming Education," US Department of Education, March 7, 2009, ed.gov.

Exhibit 7

The economic gap caused by pandemic-related unfinished learning adds to existing racial achievement gaps in the United States.

Lost economic potential per year, $ billions



Source: Curriculum Associates i-Ready assessment data; Hanushek and Woessmann, 2008; US Census; World Bank

doubles that previous record and gives districts much more freedom in how they spend the money.[28]

However, if this funding can mitigate the impact of unfinished learning, it could prevent much larger losses to the US economy. Given that this generation of students will likely spend 35 to 40 years in the workforce, the cumulative impact of COVID-19 unfinished learning over their lifetimes could far exceed the investments that are being made today.

Furthermore, much of today's federal infusion will likely be spent not only on supporting students in catching up on the unfinished learning of the pandemic but also on tackling deeper historical opportunity and achievement gaps among students of different races and income levels.

As districts consider competing uses of funding, they are juggling multiple priorities over several time horizons. The ARP funding needs to be obligated by September 2023. This restricts how monies can be spent. Districts are balancing the desire to hire new personnel or start new programs with the risk of having to close programs because of lack of sustained funds in the future. Districts are also facing decisions about whether to run programs at the district level or to give more freedom to principals in allocating funds; about the balance between academics and broader student needs; about the extent to which funds should be targeted to students who have struggled most or spread evenly across all students; and about the balance between rolling out existing evidence-based programs and experimenting with innovative approaches.

It is too early to answer all of these questions decisively. However, as districts consider this complex set of decisions, leading practitioners and thinkers have come together to form the Coalition to Advance Future Student Success—and to outline

[28] Andrew Ujifusa, "What Obama's stimulus had for education that the coronavirus package doesn't," *Education Week*, March 31, 2020, www.edweek.org.

priorities to ensure the effective and equitable use of federal funds.[29]

These priorities encompass four potential actions for schools:

1. Safely reopen schools for in-person learning.

2. Reengage students and reenroll them into effective learning environments.

3. Support students in recovering unfinished learning and broader needs.

4. Recommit and reimagine our education systems for the long term.

Across all of these actions, it is important for districts to understand the changing needs of parents and students as we emerge from the pandemic, and to engage with them to support students to learn and to thrive. The remainder of this article shares insights from our parent survey of more than 16,000 parents on these changing needs and perspectives, and highlights some early actions by states and districts to adapt to meet them.

1. Safely reopen schools for in-person learning

The majority of school districts across the country are planning to offer traditional five-days-a-week in-person instruction in the fall, employing COVID-19-mitigation strategies such as staff and student vaccination drives, ongoing COVID-19 testing, mask mandates, and infrastructure updates.[30] The evidence suggests that schools can reopen buildings safely with the right protocols in place,[31] but health preparedness will likely remain critical as buildings reopen. Indeed, by the end of the school year, a significant subset of parents remain concerned about safety in schools, with nearly a third still very or extremely worried about the threat of COVID-19 to their child's health. Parents also want districts to continue to invest in safety—39 percent say schools should invest in COVID-19 health and safety measures this fall.

2. Reengage and reenroll students in effective learning environments

Opening buildings safely is hard enough, but encouraging students to show up could be even more challenging. Some students will have dropped out of formal schooling entirely, and those who remain in school may be reluctant to return to physical classrooms. Our survey results suggest that 24 percent of parents are still not convinced they will choose in-person instruction for their children this fall. Within Black communities, that rises to 34 percent. But many of these parents are still open to persuasion. Only 4 percent of parents (and 6 percent of Black parents) say their children will definitely not return to fully in-person learning—which is not very different from the percentage of parents who choose to homeschool or pursue other alternative education options in a typical year. For students who choose to remain virtual, schools should make continual efforts to improve virtual learning models, based on lessons from the past year.

For parents who are still on the fence, school districts can work to understand their needs and provide effective learning options. Safety concerns remain the primary reason that parents remain hesitant about returning to the classroom; however, this is not the only driver. Some parents feel that remote learning has been a better learning environment for their child, while others have seen their child's social-emotional and mental health improve at home.

Still, while remote learning may have worked well for some students, our data suggest that it failed many. In addition to understanding parent needs, districts should reach out to families and build confidence not just in their schools' safety precautions but also in their learning environment and broader role in the community. Addressing root

[29] "Framework: The Coalition to Advance Future Student Success," Council of Chief State School Officers, accessed June 30, 2021, learning.ccsso.org.
[30] "Map: Where Were Schools Required to Be Open for the 2020-21 School Year?," *Education Week*, updated May 2021, edweek.org.
[31] For a summary of the evidence on safely reopening schools, see John Bailey, *Is it safe to reopen schools?*, CRPE, March 2021, crpe.org.

causes will likely be more effective than punitive measures, and a broad range of tactics may be needed, from outreach and attendance campaigns to student incentives to providing services families need, such as transportation and childcare.[32] Across all of these, a critical component will likely be identifying students who are at risk and ensuring targeted outreach and interventions.[33]

Chicago Public Schools, in partnership with the University of Chicago, has developed a student prioritization index (SPI) that identifies students at highest risk of unfinished learning and dropping out of school. The index is based on a combination of academic, attendance, socio-emotional, and community vulnerability inputs. The district is reaching out to all students with a back-to-school marketing campaign while targeting more vulnerable students with additional support. Schools are partnering with community-based organizations to carry out home visits, and with parents to staff phone banks. They are offering various paid summer opportunities to reduce the trade-offs students may have to make between summer school and summer jobs, recognizing that many have found paid work during the pandemic. The district will track and monitor the results to learn which tactics work.[34]

In Florida's Miami-Dade schools, each school employee was assigned 30 households to contact personally, starting with a phone call and then showing up for a home visit. Superintendent Alberto Carvalho personally contacted 30 families and persuaded 23 to return to in-person learning. The district is starting the transition to in-person learning by hosting engaging in-person summer learning programs.[35]

3. Support students in recovering unfinished learning and in broader needs

Even if students reenroll in effective learning environments in the fall, many will be several months behind academically and may struggle to reintegrate into a traditional learning environment. School districts are therefore creating strategies to support students as they work to make up unfinished learning, and as they work through broader mental health issues and social reintegration.[36] Again, getting parents and students to show up for these programs may be harder than districts expect.

Our research suggests that parents underestimate the unfinished learning caused by the pandemic. In addition, their beliefs about their children's learning do not reflect racial disparities in unfinished learning. In our survey, 40 percent of parents said their child is on track and 16 percent said their child is progressing faster than in a usual year. Black parents are slightly more likely than white parents to think their child is on track or better, Hispanic parents less so. However, across all races, more than half of parents think their child is doing just fine. Only 14 percent of parents said their child has fallen significantly behind.

Even if programs are offered for free, many parents may not take advantage of them, especially if they are too academically oriented. Only about a quarter of parents said they are very likely to enroll their child in tutoring, after-school, or summer-school programs, for example. Nearly 40 percent said they are very likely to enroll their students in enrichment programs such as art or music. Districts therefore should consider not only offering effective evidence-based programs, such as high-dosage tutoring and vacation academies, but also ensuring that these programs are attractive to students.

[32] Roshon R. Bradley, "A comprehensive approach to improving student attendance," St. John Fisher College, August 2015, Education Doctoral, Paper 225, fisherpub.sjfc.edu; a 2011 literature review highlights how incentives can effectively be employed to increase attendance rates.

[33] Elaine M. Allensworth and John Q. Easton, "What matters for staying on-track and graduating in Chicago Public Schools: A close look at course grades, failures, and attendance in the freshman year," Consortium on Chicago School Research at the University of Chicago, July 2007, files.eric.ed.gov.

[34] "Moving Forward Together," Chicago Public Schools, June 2021, cps.edu.

[35] Hannah Natanson, "Schools use home visits, calls to convince parents to choose in-person classes in fall," Washington Post, July 7, 2021, washingtonpost.com.

[36] Emma Dorn, Frédéric Panier, Nina Probst, and Jimmy Sarakatsannis, "Back to school: A framework for remote and hybrid learning amid COVID-19," August 31, 2020, McKinsey.com.

In Rhode Island, for example, the state is taking a "Broccoli and Ice Cream" approach to summer school to prepare students for the new school year, combining rigorous reading and math instruction with fun activities provided by community-based partners. Enrichment activities such as sailing, Italian cooking lessons, and Olympic sports are persuading students to participate.[37] The state-run summer program is open to students across the state, but the Rhode Island Department of Education has also provided guidance to district-run programs,[38] encouraging partnerships with community-based organizations, a dual focus on academics and enrichment, small class sizes, and a strong focus on relationships and social-emotional support.

In Louisiana, the state has provided guidance and support[39] to districts in implementing recovery programs to ensure evidence-based approaches are rolled out state-wide. The guidance includes practical tips on ramping up staffing, and on scheduling high-dosage tutoring and other dedicated acceleration blocks. The state didn't stop at guidance, but also flooded districts with support and two-way dialogue through webinars, conferences, monthly calls, and regional technical coaching. By scheduling acceleration blocks during the school day, rather than an add-on after school, districts are not dependent on parents signing up for programs.

For students who have experienced trauma, schools will likely need to address the broader fallout from the pandemic. In southwest Virginia, the United Way is partnering with five school systems to establish a trauma-informed schools initiative, providing teachers and staff with training and resources on trauma recovery.[40] San Antonio is planning to hire more licensed therapists and social workers to help students and their families, leveraging partnerships with community organizations to place a licensed social worker on every campus.[41]

4. Recommit and reimagine our education systems for the long term

Opportunity gaps have existed in our school systems for a long time. As schools build back from the pandemic, districts are also recommitting to providing an excellent education to every child. A potential starting point could be redoubling efforts to provide engaging, high-quality grade-level curriculum and instruction delivered by diverse and effective educators in every classroom, supported by effective assessments to inform instruction and support.

Beyond these foundational elements, districts may consider reimagining other aspects of the system. Parents may also be open to nontraditional models. Thirty-three percent of parents said that even when the pandemic is over, the ideal fit for their child would be something other than five days a week in a traditional brick-and-mortar school. Parents are considering hybrid models, remote learning, homeschooling, or learning hubs over the long term. Even if learning resumes mostly in the building, parents are open to the use of new technology to support teaching.

Edgecombe County Public Schools in North Carolina is planning to continue its use of learning hubs this fall to better meet student needs. In the district's hub-and-spoke model, students will spend half of their time learning core content (the "hub"). For the other half they will engage in enrichment activities aligned to learning standards (the "spokes"). For elementary and middle school students, enrichment activities will involve interest-based projects in science and social studies; for high schoolers, activities could include exploring their passions through targeted English language arts and social studies projects or getting work experience—either paid or volunteer. The district is redeploying staff and leveraging community-

[37] From webinar with Angélica Infante-Green, Rhode Island Department of Education, https://www.ewa.org/agenda/ewa-74th-national-seminar-agenda.
[38] *Learning, Equity & Accelerated Pathways Task Force Report*, Rhode Island Department of Education, April 2021, ride.ri.gov.
[39] *Staffing and scheduling best practices guidance*, Louisiana Department of Education, June 3, 2021, louisianabelieves.com.
[40] Mike Still, "SWVA school districts partner to help students in wake of pandemic," Kingsport Times News, June 26, 2021, timesnews.net.
[41] Brooke Crum, "SAISD superintendent: 'There are no shortcuts' to tackling COVID-related learning gaps," San Antonio Report, April 12, 2021, sanantonioreport.org.

based partnerships to enable these smaller-group activities with trusted adults who mirror the demographics of the students.[42]

In Tennessee, the new Advanced Placement (AP) Access for All program will provide students across the state with access to AP courses, virtually. The goal is to eliminate financial barriers and help students take AP courses that aren't currently offered at their home high school.[43]

The Dallas Independent School District is rethinking the traditional school year, gathering input from families, teachers, and school staff to ensure that school communities are ready for the plunge. More than 40 schools have opted to add five additional intercession weeks to the year to provide targeted academics and enrichment activities. A smaller group of schools will add 23 days to the school year to increase time for student learning and teacher planning and collaboration.[44]

It is unclear whether all these experiments will succeed, and school districts should monitor them closely to ensure they can scale successful programs and sunset unsuccessful ones. However, we have learned in the pandemic that some of the innovations born of necessity met some families' needs better. Continued experimentation and fine-tuning could bring the best of traditional and new approaches together.

Thanks to concerted efforts by states and districts, the worst projections for learning outcomes this past year have not materialized for most students. However, students are still far behind where they need to be, especially those from historically marginalized groups. Left unchecked, unfinished learning could have severe consequences for students' opportunities and prospects. In the long term, it could exact a heavy toll on the economy. It is not too late to mitigate these threats, and funding is now in place. Districts and states now have the opportunity to spend that money effectively to support our nation's students.

[42] "District- and community-driven learning pods," Center on Reinventing Public Education, crpe.org.
[43] Amy Cockerham, "TN Department of Education announces 'AP Access for All program,'" April 28, 2021, WJHL-TV, wjhl.com.
[44] "Time to Learn," Dallas Independent School District, dallasisd.org.

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