Running fast but not getting far: Five years of studying the pandemic's impact on education

The Evidence Project

CRPE
REINVENTING
PUBLIC EDUCATION

ASU
Mary Lou Fulton College for
Teaching and Learning Innovation
Arizona State University

INTRODUCTION

In the aftermath of the Covid-19 pandemic, student achievement levels remain "dismal" and adult approval of public schools is at its lowest point in decades. For nearly all student groups, but especially those who have been historically underserved, recovery remains unfinished business and a generation of American students is at risk of never catching up.

However, during the past five years, pandemic recovery has, arguably, been the focus of the entire U.S. educational system, backed by nearly $200 billion in federal funding. The question, then: why is there so much pandemic recovery work left to do? What were the key factors during and after the pandemic that impacted students so negatively? How did we end up here? After five years of concentrated research at CRPE, we have some answers to those questions to help show the way toward a full recovery. In this brief, we draw on a wide array of research, including CRPE's own, to examine three key areas:

- **Crisis response.** In the early days of the pandemic, districts struggled to fulfill their core mission of instruction. States and the federal government left districts to fend for themselves, providing little or no leadership while districts and schools grappled with complex health and safety solutions, wildly varying student learning needs, and student and adult mental health concerns. Too often, politics and fear drove decision-making. Teachers' unions aggressively represented their members and schools became a focal point for culture wars. Reopening chaos further disrupted instruction, impacting student learning.

- **Recovery.** As schools moved out of remote and hybrid instruction and back to fully in-person classes, challenges overwhelmed ambitious "learning acceleration" plans; tutoring and other strategies similarly struggled to gain traction. Schools did not have the incentives, freedom of action, or capacity to prepare teachers to give children the kinds of personalized instruction required to recover lost learning. Bright spots and pandemic innovations, such as learning pods, were rare.

- **What now and what next?** In the five years since schools began to close, districts have struggled to catch students up from pandemic-related learning disruptions. The federal aid that went to districts helped as long as it lasted but did not fully address student learning losses. And now, most districts have returned to their pre-pandemic approaches to instruction while continuing to confront declining attendance and enrollment, budget deficits, labor conflicts, and unstable political support. The current federal climate will also pose new, unknown challenges for states and school districts.

For a full recovery, the public education system—from the federal government to individual classrooms—needs an infusion of new ideas and approaches. Educational leaders need to start asking and answering hard questions about how to rescue the pandemic generation.

METHODS & DATA

As news of the Covid-19 pandemic spread in early March 2020 and schools started to close, CRPE saw an immediate need to **track how districts were responding.** From 2020 to 2023, we tracked a sample of 100 large and urban districts across the country serving nearly 10 million students.

While the specific districts tracked changed over time, the sample focused on large and urban districts throughout. We searched their websites and social media pages, tracked superintendents' announcements, scoured local news reports, and read board meeting minutes to report on their activities. We reviewed everything, from which districts reported providing computers, WiFi hotspots, and food to families to which districts were training teachers for remote instruction, among many other measures. For the next three years, we supplied unique real-time data and helped the field make sense of the pandemic's effects on schools and students in the face of a volatile and politicized national conversation.

Our annual **State of the American Student** reports have summarized how students have continued to fare. Through our Evidence Project collaboration with the Walton Family Foundation, we've published the findings of over 50 working groups and 13 consensus panels and sponsored over $3 million of original research on the pandemic's impact on students.

As part of our collaboration with RAND on the **American School District Panel**, we have repeatedly surveyed a nationally representative sample of district leaders about their responses to student and school needs during and after the pandemic. Between 2021 and 2024, CRPE also followed up annually with a subsample of districts, conducting in-depth interviews about school reopenings, plans to restore lost learning (and their amendment over time), challenges posed by student and teacher emotional needs and absenteeism, adjusting to the end of special pandemic funding, and the post-pandemic problems of enrollment decline, a looming fiscal cliff, and political change.

This brief draws heavily from those in-depth studies but also incorporates findings from many other researchers investigating post-pandemic learning loss and district response. To identify other research, we conducted web searches by topic and reviewed the websites of other organizations tracking schools' pandemic response. Though the topics we cover are extensively researched, our own studies cover a relatively small number of districts and the other studies we reference use diverse methods, samples, and databases, some national and some focused on particular states and localities. Thus, our evidence might not catch all the variations of district challenges and responses. Readers concerned with particular districts should ask questions and check local records.

CRISIS RESPONSE

Districts provided relief for families but stalled on remote instruction

When districts had to close schools in March 2020, the transition to remote schooling was rocky and, in some places, chaotic. As we reported at the time, "Districts are focusing first on basic needs: health, safety, nutrition. . . . [They] seem unsure how to address technology and internet access, but some are moving ahead. . . . Few districts have comprehensive distance learning plans in place yet." Food was the easiest for most districts to provide, in part because the USDA speedily cleared regulatory barriers. Teachers and district employees were quick to take on new responsibilities for family support. By the end of the 2019–20 school year, many districts and schools had figured out how to get devices and hot spots for most of their students. This was a bright spot in many districts' early pandemic response.

Though relatively unconstrained when it came to delivering food and devices, districts struggled with their core task: instruction. Districts were simply overwhelmed by the complexity of creating remote learning systems and were further blocked by pre-pandemic regulations, contracts, job descriptions, and compliance mentalities. For example, in March 2020 some districts did not start remote schooling—which was the only thing they could do for students at the time—as they feared being accused of civil rights violations for not serving students eligible for special education services that required 1:1 instruction. Taking attendance was another example—many districts got hung up on how to create consistent rules for counting students present during remote instruction.

At the end of the 2019–20 school year, many districts relied on packets of worksheets and public access television shows. These allowed no direct teacher-student interactions; students had to pace themselves, and many disengaged. Few districts (around 15%) required teachers to monitor their students' progress. Some private and charter schools quickly provided live, all-day, interactive instruction, but few traditional public schools did the same.

By and large, states and the federal government left districts to fend for themselves

Compounding challenges for district leaders on how to proceed, there was a general lack of leadership from state boards of education and the federal government about how districts and schools should respond to evolving circumstances. The U.S. Department of Education and state departments of education were slow to provide guidance about instruction, quarantining, disease control, response to mental health issues, and services to students eligible for special education. In many cases, states lacked sufficient capacity to provide timely and specific guidance. District leaders struggled with this lack of clarity. The resulting confusion and uncertainty trickled down to principals, teachers, and, eventually, students and families.

Later, state departments of education relieved schools from the burdens of student testing and performance-based accountability for the 2020–21 school year, and in some cases waived requirements for high school graduation. These testing and other

regulations were difficult to reinstate until the 2021–22 school year (or later), delaying the restart of many state accountability programs. Tennessee and other states mounted tutoring programs to help students who had missed key facts or skills, but most states emphasized waivers and fiscal supplements, leaving instructional decisions to districts. Schools and districts with strong external nonprofit or university partners could get assistance, but others worked with little help.

Politics and fear of infection complicated returning to in-person instruction for many districts

When it was time for school to start in August 2020, many localities had spent the summer planning for a complete return to normal in-person instruction. But with outbreaks rising, the expectation of normalcy was unrealistic. Many districts had not settled on their approaches to instruction, infection control, or support for students and teachers traumatized during the earliest days of the pandemic.

As a result, politics, not science or objective disease threats, primarily drove many decisions about how long to keep schools closed. Schools become the focal point for national debates over masks and vaccinations. Red localities were more likely to reopen schools in September 2020 and keep them open, fueled by widespread skepticism about federal masking and separation guidance, as well as less organized teacher opposition. In contrast, children and parents in big cities were more likely to be traumatized by family deaths and neighborhood disorder. City teachers' unions also aggressively represented their members who feared returning to school before vaccines were widely available. All these factors contributed to late and unstable school openings. Wide geographic variation in what schooling looked like for students on any given day was common in the first 18 months of the pandemic.

When schools reopened, either with full or hybrid schedules, teachers and parents were nervous about Covid contagion. Many districts were forced to temporarily re-close some or all their schools—despite what they had planned to do—due to outbreaks or rising rates of infection in their communities. Students often shifted between in-person and remote (sometimes entirely self-paced) instruction. Parents faced unexpected childcare requirements and difficulties meeting their job obligations. Teacher absenteeism, whether due to illness or caring for children at home because schools were closed, was also high.

Many districts could not hire enough substitutes. When faced with high teacher absences, central office administrators and principals coped by combining classrooms and filling in for absent teachers. According to RAND's nationally representative survey in Spring 2022, nearly 90% of district leaders reported they had to change their operations.

Reopening chaos further disrupted instruction and impacted student learning

The pandemic continued to disrupt schools and classrooms throughout the 2020–21 school year. The quality of instruction varied widely. As we reported in October 2020:

> For students who do connect online, the actual learning experience appears incredibly varied. Students are getting more access to live instruction than in the spring (typical plans we analyze set aside about three to four hours a day). What happens during those hours also varies widely. The experience of a remote student enrolled in a self-paced virtual academy, versus a remote student in a live, remote, teacher-led class, versus a remote student live streaming a live class that a teacher is delivering to other students in person, are all quite different. And these experiences are all dramatically different than that of a student attending school in person, which is disproportionately more likely for higher-income students.

Students attending school in-person could have one teacher one day and another the next; teachers also had different combinations of students depending on the day. In those circumstances, educators hoped to give students some instruction but did not think they could compensate for lost learning. As the leader of a small school district said,

> "A couple of schools are dealing with vacancies, so they know students are not getting the instruction they need. Another school has a ton of first-year teachers. They know they're not getting the instruction they need."

Reports that teachers and principals were worn out to the point of burnout were frequent.

The earliest evidence suggested that student learning loss was much greater than expected. A CRPE-led consensus panel reviewed 22 reports using data primarily from the 2020–21 school year. It concluded that, on average, children at all grade levels had suffered significant delays in learning and that the degree of those delays was closely related to the amount of time they had spent out of school or in remote instruction (this pattern held internationally as well). Consistent exposure to in-person instruction mattered more than students' race or income when it came to learning delays. However, low-income students and students of color spent the most time in remote instruction on average and, therefore, lost the most learning. In this way, closures worsened preexisting inequities.

RECOVERY

Challenges overwhelmed ambitious learning acceleration plans

District leaders had ambitious plans to restore lost learning. The core of their strategy was acceleration: teaching all students a subset of essential grade-level content and providing instant help to those who had missed key ideas or skills. District leaders renounced remediation, or assigning coursework below grade level to students who had lost learning.

At first, district leaders were confident their schools could switch to acceleration, but acknowledged that it might not be enough. Recognizing the depth of loss some students experienced in the pandemic, some leaders intended to provide intensive teacher training around new complementary roles of grade-level instruction and instant intervention, as well as to forge new partnerships with community groups for other student support.

In Spring 2021, we noted that districts with preexisting coherent instructional systems (standards-based curricula aligned to teacher training and assessments of student progress) would find it easier to follow the acceleration strategy. But almost immediately, even those districts struggled due to continued and compounding challenges such as:

- **Insufficient teacher preparation**. Few districts had been able to train teachers in the skills required for acceleration, because of low capacity and low availability of substitute teachers, which meant that teachers would have had to receive professional development outside of normal work hours—something district leaders reported teachers resisted.

- **Inflexibility based on regulations, collective bargaining agreements, and ingrained habits.** Aside from charter schools, districts had to petition states for specific waivers for schools that wanted to try new approaches to instruction or changes in teacher roles (e.g. working in teams).

- **Little data or tracking for student learning gaps.** Due to the lack of regular student assessment in both 2019–20 and 2020–21, districts could not give teachers much help in anticipating student needs. Teachers discovered in real time the differences in students' preparation and found that individual students had unpredictable gaps in their learning.

- **Challenging classrooms.** District leaders acknowledged serious problems with student behavior. Student social emotional issues (some that existed pre-pandemic and others created or exacerbated by pandemic isolation, trauma, and screen overuse) and inability to settle into classroom routines challenged both teachers and learners. School and district leaders tried to help teachers address student needs under the broad heading of social emotional learning (SEL), but this took time and resources that could otherwise have gone toward enhancing academic instruction.

Learning acceleration also encountered a number of compounding challenges related to teacher staffing that existed prior to the pandemic but were worsened by "the great resignation" starting in the 2021–22 school year. Many districts had high vacancy rates and found they were hiring "greener" staff. As a district leader told us in 2021,

> "It's not that we necessarily lost more people than we would in the normal year…it's because there were significantly fewer applicants in the workforce, or people who wanted to teach, [or] have never taught before and so didn't quite understand what they were getting themselves into."

Tutoring and other strategies encountered similar challenges; "bright spots" were rare

Federal aid from the American Rescue Plan/Elementary and Secondary School Emergency Relief (ESSER) went to districts with few restrictions between March 2020 and March 2021, with districts required to spend the money by September 2024. Once learning acceleration had proven too difficult to implement in the face of ongoing challenges, districts moved toward other research-based strategies, like high-dose tutoring and extended learning (e.g. summer school and after school), for students most in need.

However, tutoring and extended learning programs also proved difficult to implement at the level required to see the positive impact on student learning showcased in research. While ESSER had provided districts with the necessary funds, many found it difficult to staff the programs due to shortages in the qualified labor pool. Initiatives to develop tutors from new sources cropped up, but aligning students' tutoring and extended learning time with the information from teachers—such as individual learning gaps and the content they were currently teaching—was also hard. Attendance in these interventions also tended to be low. Few parents expressed interest in summer school or tutoring for their children, possibly due to pandemic-related burnout or a lack of understanding about the extent of learning loss. Most research suggests that these challenges prevented students from receiving the "dosage" necessary to produce the increases in learning promised by the research.

Districts also used federal recovery funds to hire more staff focused on meeting students' mental health needs. While many students had been struggling with their mental health pre-pandemic, upon the return to in-person schooling their needs were immediate. Districts responded by hiring counselors and adding elements to curricula to support student social emotional health and well-being.

Districts also used their ESSER funds to pay for one-time expenses, such as facility improvements and upgrading curricula to high-quality instructional materials (HQIM) designed to align instruction with standards. While some districts saw the adoption of HQIM as a way to raise the quality of teaching in all schools, curriculum adoptions could stoke internal conflicts. Implementing new materials meant teachers had to spend significant time on professional development—some district leaders reported that this was a challenge for teachers still recovering from burnout.

Some districts (and one state) found ways to recover learning losses. They are by and large following the same playbook as everyone else: providing tutoring, adopting HQIM, developing teacher capacity, and building leadership pipelines, among other approaches. Preliminary research suggests that what set them apart was their ability

to navigate barriers that defeated other districts. Their strategies included:

- Building on existing resources and programs

- Leveraging external partnerships to increase capacity and provide teacher training

- Using ESSER funds to provide stipends to teachers for filling staffing gaps

- Building data systems that easily and reliably identify students who need the most extra help

- Retaining leaders with vision and commitment to these initiatives.

Teachers and parents liked learning hubs and pods, but districts didn't continue supporting them

Early in the pandemic, some districts and communities pursued innovative approaches like learning hubs, homeschooling, and learning pods when faced with prolonged closures or remote-only options. These approaches helped combat isolation, provide childcare, and ensure quality instruction.

Some learning pods were organized by districts and staffed by regular teachers but many were started by families in historically underserved communities and staffed with unconventional teachers. In our survey of 152 families and 101 instructors who participated in pods during the 2020–21 school year, over two-thirds of families cited at least one tangible benefit for their students, such as higher engagement in learning or feelings of belonging. Pod instructors reported gaining professional freedom and supportive relationships with families.

Once schools reopened again, districts withdrew their support for pods and learning hubs despite continued parent interest; researchers at the University of Southern California found that, if offered, 25% of parents would have enrolled their children in a pod. As CRPE reported in August 2021, only 37% of the pods we identified in 2020 continued operating through the 2021–22 school year. Most succumbed in the absence of school district support, citing concerns about instructional rigor, insufficient support services, and unsustainable costs for families. Another group that tracked pandemic learning pods summarized the phenomenon: "Despite the moment that pods had during the pandemic, once in-person learning became more available, there was a snapback of about eighty-five percent."

WHAT NOW & WHAT NEXT

Student achievement remains far too low, chronic absenteeism is still too high, and challenges keep racking up

The lost learning problem remains unsolved. Research has begun to show federal pandemic fund spending helped students recover in some ways, albeit slowly. However, those who lost the most learning are not catching up. Learning losses are now showing up in NAEP scores, SAT and ACT scores, college readiness and performance, and international comparisons.

As CRPE reported in our 2024 State of the American Student report, reading and math scores remain well below pre-pandemic levels for nearly all categories of students but especially for historically marginalized students, English language learners, and students with disabilities. Older students continue to graduate with significant learning gaps, while younger students not in school during the pandemic also show learning delays. Continued student absenteeism and disengagement complicate efforts, as students learn less if they aren't physically in school.

The sudden temporary increase in federal funding also created challenges for districts. While many districts tried to spend the temporary money on one-time expenses, in some cases they used the funds to hire staff—creating permanent spending commitments that may lead to insolvency.

School districts in some localities might yet master these challenges. But in those that are still faltering, including many of the big cities CRPE has profiled over the past five years, it is highly unlikely that schools can make up learning deficits before affected students leave school. Students who did not enter school until after the pandemic, meanwhile, may also be hurt by continuing turmoil. While there are districts and schools that have found ways to recover learning losses, they are a distinct minority.

Unless the vast majority of schools can find ways to become much more effective, it is likely that inequalities and inequities that existed before the pandemic will continue and in some cases worsen. A decade's graduates are likely to leave school more unprepared for work and higher education than those educated before the pandemic.

Can public schools adapt in the face of new hurdles and few straightforward answers?

The pandemic changed our world, including the conditions of work, the ways people use their leisure time, and even our political system. Challenges from student mental health and attendance problems to parental and community discontent show no signs of abating. The pandemic exacerbated inequities that predated it, worsening gaps between the educational haves and have-nots.

Early in the pandemic, district leaders recognized that student needs would require more flexible and personalized instruction. Schools tried to meet student educational and mental health needs and, for a while, tried to change instruction via learning pods, learning acceleration, and interventions like tutoring and summer school.

But as described in the sections above, many districts, overwhelmed by a succession of challenges and without straightforward evidence of what has worked, have found their way back to pre-pandemic habits—especially efforts to centralize control of instruction, with teachers working alone in their classrooms.

Further, new challenges keep coming. Revenue shortfalls, driven by enrollment declines, are especially causing pain now that federal ESSER funds have expired. Mismatches between district incomes and the salary demands from teachers' unions salary may lead to further district shutdowns. The need to adapt to lower revenues, and in extreme cases to close schools, is leading to community conflict and movements to fire superintendents who provided steady hands throughout the pandemic.

The Trump administration's attack on the U.S. Department of Education will also create challenges. At the time of this publication, changes in federal program structure, requirements, and funding are underway—the Department of Education was just cut in half. Districts will likely face less federal money, obfuscation around how to best serve students with special needs, and new pressures to shift funding away from current beneficiaries.

In this turbulent environment, state and district leaders need to ask whether they can adapt by reallocating resources and redeploying talent in order to meet students' needs. They need to consider ideas that were abandoned early in the pandemic—and ask for state and civic leaders to support these initiatives. For example:

- Teaching all students at grade level but intervening quickly when a child shows evidence of missing a necessary idea or skill

- Reconfiguring school staffing so some teachers are instantly available to help students who are falling behind

- Establishing learning pods for students who resist returning to the regular classroom and recruiting community partners to support the teachers who staff these pods

- Closely tracking student progress and promptly informing parents, teachers, and school leaders about whether students are making normal progress

- Providing alternatives for students who are not learning well in their current schools

These moves are heavy lifts and unlikely to happen unless state officials seriously consider major waivers of regulations and teacher unions allow experimentation with new teacher roles and school staffing rules. For districts to deliver greater personalization and better learning opportunities for students most in need, leaders will need to deliver a lot more than eternal optimism and good intentions. They must ask key questions—and researchers should be prepared to help answer them:

- What worked and didn't work over the previous five years?

- How are the students most in need going to receive extra time and attention?

- What skills and new work habits do teachers need to implement?

- What kinds of support and mentoring do teachers need to change their approaches?

- Who will resist change and what incentives will help them adopt new practices?

- What can be done to get students out of schools that are not adequately serving them and into environments that offer better learning opportunities?

- How much money available to public schools can be reallocated to necessary changes, and what new spending is needed?

The answers to these questions are likely to be daunting and will require a great deal more from school systems and their communities than has become the norm. They might also require the creation of options that are beyond district capacity, including new uses of technology and new public education providers. However, maintaining the status quo amounts to accepting learning losses and inequities (and their eventual economic consequences) and harm to an entire generation of students.

REFERENCES

Alderman, Chad. "Public Schools Added 121,000 Employees Last Year, Even as They Served 110,000 Fewer Students." *The 74 Million,* January 21, 2025.

———. "There Really Was a 'Mississippi Miracle' in Reading. States Should Learn from It." *The 74 Million*, February 25, 2025.

American Enterprise Institute. "Chronic Absenteeism: 2017–2024." Returntolearntracker.net. Last updated January 17, 2025.

Arundel, Kara. "ACT, SAT Scores Decline Year Over Year." *K-12 Dive*, October 17, 2024.

Barshay, Jill. "PROOF POINTS: Why Are Kids Still Struggling in School Four Years After the Pandemic?" *Hechinger Report*, August 19, 2024.

———. "The Kids Are Not Bouncing Back." *Hechinger Report*, January 29, 2025.

Bartlett, Lora. "Teachers Were Told to 'Give Grace' as the Pandemic Started. They Did That and Much More." *Education Week*, July 26, 2021.

Berger, Marc, Ming Kuang, Laura Jerry, and David Freund. *Impact of the Coronavirus (COVID-19) Pandemic on Public and Private Elementary and Secondary Education in the United States: Results from the 2020–21 National Teacher and Principal Survey*. Washington, DC: National Center for Education Statistics, U.S. Department of Education, 2022.

Blad, Evie. "Schools Are Desperate for Substitutes and Getting Creative." *Education Week*, January 20, 2022.

Brenan, Megan. "K-12 Teachers Worried about COVID-19 on the Job." *Gallup*, July 24, 2020.

Brooks, Christopher D., and Matthew G. Springer. *ESSER-ting Preferences: Examining School District Preferences for Using Federal Pandemic Relief Fundings*. EdWorkingPaper: 24-913. Annenberg Institute at Brown University, 2024. https://doi.org/10.26300/mpm0-1a97.

Bryant, Jessica. "Pandemic Learning Loss: How COVID-19 Academically Impacted College Students." Best Colleges, April 8, 2024.

Burtis, Eloise, and Sofoklis Goulas. *Declining School Enrollment Since the Pandemic*. Washington, D.C.: Brookings, October 12, 2023.

Bushweller, Kevin. "Americans' Satisfaction with Public Schools Hits 24-Year Low." *Education Week,* February 5, 2025.

Camera, Lauren. "DeVos: Not My Job to Track School Reopening Plans." *U.S. News,* October 20, 2020.

Carbonari, Maria V., Miles Davison, Michael DeArmond, Daniel Dewey, Elise Dizon-Ross, Dan Goldhaber, et al. "The Impact and Implementation of Academic Interventions During COVID-19: Evidence from the Road to Recovery Project." *AERA Open* 10 (2024). https://doi.org/10.1177/23328584241281286.

Center for Research on Education Outcomes. *A Short Brief on Learning Loss: Insights from the COVID-19 Pandemic.* Stanford, CA: Stanford University, 2020.

Center on Reinventing Public Education. "2020-21: The State of School Reopening." Google Slides. Accessed February 20, 2025.

———. "Rapid Response Data Center: March 2020-August 2020." Accessed February 20, 2025.

———. "The Evidence Project Research Tracker." Accessed February 20, 2025.

———. *The State of the American Student: Fall 2024.* Tempe, AZ: Center on Reinventing Public Education, 2024.

Chen, Jarvis T., and Nancy Krieger. "Revealing the Unequal Burden of COVID-19 by Income, Race/Ethnicity, and Household Crowding: US County Versus Zip Code Analyses." *Journal of Public Health Management and Practice* 27, Supplement 1 (January/February 2021): S43-S56. https://doi.org/10.1097/PHH.0000000000001263.

Cherone, Heather. "Mayor Brandon Johnson Defends School Board's Decision to Fire CEO Pedro Martinez." WWTW News, January 6, 2025.

Cottingham, Benjamin W., and H. Alix Gallagher. *Educational Leadership and COVID-19: Lessons from Kern County*. Stanford, CA: Policy Analysis for California Education, Stanford University, December 2021.

Council of Chief State School Officers. "CCSSO's High-Quality Instructional Materials and Professional Development (IMPD) Network." Accessed February 28, 2025.

Davis, Rebecca. "Help Wanted: Strategies to Recruit a Tutoring Workforce on a Large Scale." MDRC, December 2023.

DeArmond, Michael, and Lisa Chu. *How Are School Districts Addressing Student Social-Emotional Needs during the Pandemic?* Seattle, WA: Center on Reinventing Public Education, 2021.

DeArmond, Michael, Betheny Gross, and Paul Hill. *How Six School Systems are Responding to Disrupted Schooling: Will It Be Enough?* Seattle, WA: Center on Reinventing Public Education, 2021.

DeArmond, Michael, Paul Hill, Kate Destler, and Christine Campbell. *Whack-A-Mole: School Systems Respond to Disrupted Learning in 2021*. Seattle, WA: Center on Reinventing Public Education, 2022.

DeArmond, Michael, Heather Schwartz, and Paul Hill. *Finding Teachers and Bus Drivers Is a Big Problem, but a Different Staffing Challenge Is Looming in School Districts.* Seattle, WA: Center on Reinventing Public Education, 2022.

Dee, Thomas S. *Where the Kids Went: Nonpublic Schooling and Demographic Change during the Pandemic Exodus from Public Schools.* Washington, D.C.: Urban Institute, 2023.

Dee, Thomas S., Elizabeth Huffaker, Cheryl Phillips, and Eric Sagara. "The Revealed Preferences for School Reopening: Evidence from Public-School Disenrollment." *American Educational Research Journal* 60, no. 5 (December 22, 2022): 916–40. https://doi.org/10.3102/00028312221140029.

Destler, Kate, and Paul Hill. *Back to School, but Not Caught Up: After School Reopenings, Administrators Eager to Tackle Learning Loss Continue to Face Challenges*. Seattle, WA: Center on Reinventing Public Education, 2022.

Dewey, Dan, Erin Fahle, Thomas J. Kane, Sean F. Reardon, and Douglas O. Staiger. *Federal Pandemic Relief and Academic Recovery*. Cambridge, MA: Center for Education Policy Research, Harvard University, 2024.

Diliberti, Melissa Kay, and Heather L. Schwartz. *District Leaders' Concerns About Mental Health and Political Polarization in Schools*. Santa Monica, CA: RAND Corporation, 2022.

———. *Districts Continue to Struggle with Staffing, Political Polarization, and Unfinished Instruction*. Santa Monica, CA: RAND Corporation, 2022.

Dusseault, Bree, and Alvin Makori. *What Does Attendance Mean for Remote Learners in a Pandemic? How 106 Districts Are Dealing with Absenteeism, Student Engagement, and Grades*. Seattle, WA: Center on Reinventing Public Education, January 2021.

Dusseault, Bree, and Travis Pillow. *Still No Consistent Plan for Remote Learning for Hundreds of Thousands of Students at Some of America's Biggest School Districts*. Seattle, WA: Center on Reinventing Public Education, May 2020.

Education Recovery Scorecard. "District Success Stories." Accessed February 21, 2025

Florida Department of Education, "Florida Rejects Publishers' Attempts to Indoctrinate Students," press release, April 15, 2022.

Goldhaber, Dan, and Grace Falken. *ESSER and Student Achievement: Assessing the Impacts of the Largest One-Time Federal Investment in K–12 Schools*. CALDER Working Paper No. 301-0624, 2024.

Goldhaber, Dan, Grace Falken, and Roddy Theobald. *ESSER Funding and School System Jobs: Evidence from Job Posting Data*. CALDER Working Paper No. 297-0225-2, 2025.

Grissom, Jason A., and Lara Condon. "Leading Schools and Districts in Times of Crisis." *Educational Researcher* 50, no. 5 (2021): 315–324. https://doi.org/10.3102/0013189X211023112.

Gross, Betheny, and Alice Opalka. *Too Many Schools Leave Learning to Chance During the Pandemic*. Seattle, WA: Center on Reinventing Public Education, 2020.

Grossmann, Matt, Sarah Reckhow, Katharine O. Strunk, and Meg Turner. "All States Close but Red Districts Reopen: The Politics of In-Person Schooling During the COVID-19 Pandemic." *Educational Researcher* 50, no. 9 (2021): 637–648. https://doi.org/10.3102/0013189X211048840.

Hashim, Ayesha K., Hayley Weddle, and Ogechi N. Irondi. "Responding to Crisis: A Multiple Case Study of District Approaches for Supporting Student Learning in the COVID-19 Pandemic." *Educational Administration Quarterly* 60, no. 5 (2024): 583–623. https://doi.org/10.1177/0013161X241271317.

Hill, Paul. *Student Achievement Gaps and the Pandemic: A New Review of Evidence from 2021–2022*. Tempe, AZ: Center on Reinventing Public Education, 2022.

———. *What Lies Ahead for Teachers Unions' Common Good Agendas*. Tempe, AZ: Center on Reinventing Public Education, March 2024.

Hill, Paul, Sarah McCann, Lydia Rainey, and Chelsea Waite. *When Challenges Never Let Up: School District Leaders Steer through Hazards in Baltimore and Chicago*. Tempe, AZ: Center on Reinventing Public Education, 2024.

Jackson, C. Kirabo, and Claire L. Mackevicius. "What Impacts Can We Expect from School Spending Policy? Evidence from Evaluations in the United States." *American Economic Journal: Applied Economics* 16, no. 1 (2024): 412–46. https://doi.org/10.1257/app.20220279.

Jacobson, Linda. "Exclusive Data: Thousands of Schools at Risk of Closing Due to Enrollment Loss." *The 74 Million*, January 9, 2024.

Jakubowski, Maciej, Tomasz Gajderowicz, and Harry Anthony Patrinos. "COVID-19, School Closures, and Student Learning Outcomes: New Global Evidence from PISA." *npj Science of Learning* 10 (2025): 5. https://doi.org/10.1038/s41539-025-00297-3.

Jochim, Ashley, Eupha Jeanne Daramola, and Morgan Polikoff. *Teachers and Tutors Together: Reimagining Literacy Instruction in Oakland.* Seattle, WA: Center on Reinventing Public Education, 2023.

Jochim, Ashley, Melissa Kay Diliberti, Heather Schwartz, Kate Destler, and Paul Hill. *Navigating Political Tensions Over Schooling: Findings from the Fall 2022 American School District Panel Survey*. Seattle, WA: Center on Reinventing Public Education, 2023.

Jochim, Ashley, and Bryan C. Hassel. *States Must Take Decisive Action to Avert the Coming Education Crisis*. Seattle, WA: Center on Reinventing Public Education, July 2020.

Jochim, Ashley, and Jennifer Poon. *Crisis Breeds Innovation: Pandemic Pods and the Future of Education*. Seattle, WA: Center on Reinventing Public Education, 2022.

Kaufman, Julia H., and Melissa Kay Diliberti. *Divergent and Inequitable Teaching and Learning Pathways During (and Perhaps Beyond) the Pandemic*. Santa Monica, CA: RAND Corporation, 2021.

Kaufman, Julia H., Elaine Lin Wang, Kate E. Kennedy, Jonathan Schweig, and Kate Giglio. *The Improving Instructional System Coherence Toolkit: A Resource for K-12 Districts and Schools*. Santa Monica, CA: RAND Corporation, 2023.

Klein, Alyson. "Not All Kids Have Computers, and They're Being Left Behind with Schools Closed by the Coronavirus." *The Conversation*, April 21, 2020.

Kraft, Matthew A., Danielle Sanderson Edwards, and Marisa Cannata. *The Scaling Dynamics and Causal Effects of a District-Operated Tutoring Program*. EdWorkingPaper: 24 -1030. Annenberg Institute at Brown University, 2024: https://doi.org/10.26300/zcw7-4547

Kraft, Matthew A., Nicole S. Simon, and Melissa Arnold Lyon. *Sustaining a Sense of Success: The Importance of Teacher Working Conditions During the COVID-19 Pandemic*. EdWorkingPaper: 20-279. Annenberg Institute at Brown University, 2024. https://doi.org/10.26300/35nj-v890

Lake, Robin and Bree Dusseault. *How 18 Top Charter School Networks Are Adapting to Online Education, and What Other Schools Can Learn from Them*. Seattle, WA: Center on Reinventing Public Education, April 2020.

———. *School Systems Make a Slow Transition From the Classroom to the Cloud*. Seattle, WA: Center on Reinventing Public Education, April 2020.

———. *We Reviewed the School Reopening Plans for 106 Districts Around the Country. Here's How They Square With Reality*. Seattle, WA: Center on Reinventing Public Education, October 2020.

Lehrer-Small, Asher. "New Data: Was 2022's Summer Learning 'Explosion' Enough to Reverse COVID Losses?" *The 74 Million*, August 22, 2022.

Makori, Alvin, Patricia Burch, and Susanna Loeb. *Scaling High-Impact Tutoring: School-Level Perspectives on Implementation Challenges and Strategies*. EdWorkingPaper: 24-923. Annenberg Institute at Brown University, 2024. https://doi.org/10.26300/h8z5-t461.

Marianno, Bradley D. *Teachers' Unions: Scapegoats or Bad-Faith Actors in COVID-19 School Reopening Decisions?* Washington, D.C.: Brookings, March 25, 2021.

McCann, Sarah, and Barbara Talkington. *Statewide Assessment Plans Are Unclear and Neglect Remote Learners*. Seattle, WA: Center on Reinventing Public Education, May 2021.

McCormick, Rachel, Janey Woo, Ben Steiner, and Jean Grossman. *Tutoring Lessons from New Mexico How a Pilot Program Targeting Ninth-Graders Led to Shifting Sessions from Weekends and Evenings to Regular School Hours*. New York, NY: MDRC, June 2023.

McShane, Michael. "Parents Are Scared About The Coronavirus And Other Insights From The Schooling In America Survey." *Forbes,* August 5, 2020.

McShane, Michael, and Paul DiPerna. *The Demand Side of Alternative Education Products.* Seattle, WA: Center on Reinventing Public Education, 2022.

Mervosh, Sarah. "The Pandemic Erased Two Decades of Progress in Math and Reading." *New York Times*, September 1, 2022.

Morris, Sarah. "Students Heading to College Next Year Are the Least College-Ready in 30 Years." *We Are Teachers*, March 19, 2024.

Nickow, Andre, Philip Oreopoulos, and Vincent Quan. "The Promise of Tutoring for PreK–12 Learning: A Systematic Review and Meta-Analysis of the Experimental Evidence." *American Educational Research Journal* 61, no. 1 (2024): 74–107. https://doi.org/10.3102/00028312231208687.

Opalka, Alice. *From Crisis Response to Sustainable Solution: What's Next for School District- and Community-Driven Learning Pods?* Seattle, WA: Center on Reinventing Public Education, August 2021.

Patrinos, Harry Anthony, Maciej Jakubowski, and Tomasz Gajderowicz. *The Learning Crisis in the United States Three Years After COVID-19*. EdWorkingPaper: 25-1147. Annenberg Institute at Brown University, 2025. https://doi.org/10.26300/mjmq-kr08

Pitts, Christine, and Bree Dusseault. "School Reopening, by the Numbers—How 100 Top Districts Are (and Aren't) Adapting: More Vaccine Rules for Teachers and Students, But Few Learning Plans for Quarantined Kids." *The 74 Million,* September 21, 2021.

Powell Crain, Trisha. "To Improve at Math, Do Students, Teachers Simply Need More Class Time?" *Advance Local*, September 19, 2023.

Rapaport, Amie, and Daniel Silver. *Two Percent of U.S. Children Receive High Quality Tutoring, Despite Billions Funneled into School Systems*. Los Angeles: USC Schaeffer Institute, March 9, 2023.

Roza, Marguerite, and Katherine Silberstein. *The ESSER Fiscal Cliff Will Have Serious Implications for Student Equity*. Washington, D.C.: Brookings, September 12, 2023.

Saavedra, Anna, and Morgan Polikoff. "Analysis: Tutoring, Summer School, Pods—Survey Finds Parents Aren't So Thrilled About Most K-12 COVID Recovery Solutions on the Table." *The 74 Million*, June 13, 2021.

Saavedra, Anna, Amie Rapaport, and Dan Silver. *Why Some Parents Are Sticking with Remote Learning Even as Schools Reopen*. Washington, D.C.: Brookings, June 8, 2021.

Saleh Rauf, David. "An Unexpected Tool for Remote-Learning During Coronavirus: Public TV Stations." *Education Week*, April 6, 2020.

Schueler, Beth E., Catherine Armstrong Asher, Katherine E. Larned, Sarah Mehrotra, and Cynthia Pollard. "Improving Low-Performing Schools: A Meta-Analysis of Impact Evaluation Studies." *American Educational Research Journal* 59, no. 5 (2022): 975–1010. https://doi.org/10.3102/00028312211060855.

Schwartz, Heather L., and Melissa Kay Diliberti. *Flux in the Educator Labor Market: Acute Staff Shortages and Projected Superintendent Departures*. Santa Monica, CA: RAND Corporation, 2022.

———. *School Districts Have Expanded Their Nonacademic Services for 2021–2022, While Academic Offerings Remain Much the Same*. Santa Monica, CA: RAND Corporation, 2021.

Schwartz, Heather L., Melissa Kay Diliberti, Lisa Berdie, David Grant, Gerald P. Hunter, and Claude Messan Setodji. *Urban and Rural Districts Showed a Strong Divide During the COVID-19 Pandemic.* Santa Monica, CA: RAND Corporation, 2021.

Sparks, Sarah D. "Data: How Is Coronavirus Changing States' Graduation Requirements?" *Education Week*, April 21, 2020.

Steiner, Elizabeth D., and Ashley Woo. *Job-Related Stress Threatens the Teacher Supply*. Santa Monica, CA: RAND Corporation, 2021.

Tareen, Sophia. "Chicago Schools Reopening Uncertain as Union Talks Stall." *The Southern Illinoisan*, February 1, 2021.

Tate Sullivan, Emily. "Summer Learning Programs Struggle—and Devise Solutions—as Staff Shortages Persist." *EdSurge*, July 18, 2022.

Tennessee Department of Education. "TN ALL Corps." Accessed February 21, 2025.

Thompson, Carolyn. "Homeschooling Surge Continues Despite Schools Reopening." *Associated Press*, April 14, 2022.

Ujifusa, Andrew. "The Feds Offered Waivers on ESSA Accountability. Here's Where States Stand on Getting Them." *Education Week*, June 24, 2021.

U.S. Department of Agriculture, Food and Nutrition Service. *COVID-19 Nationwide Waiver to Allow Parents and Guardians to Pick Up Meals for Children.* Washington, D.C.: U.S. Department of Agriculture. Last modified December 20, 2023.

U.S. Department of Education. *Frequently Asked Questions: Elementary and Secondary School Emergency Relief Programs, Governor's Emergency Education Relief Programs.* Washington, D.C.: U.S. Department of Education, 2022.

U.S. Department of Education, National Center for Education Statistics. "New Report Examines Trends in U.S. Public School Enrollment and Demographic Shifts," press release, December 4, 2024.

———. *Private School Enrollment*. Washington, D.C.: U.S. Department of Education. Last updated May 2024.

———. "Public and Private Schools: New Findings on the Impact of COVID-19," press release, July 6, 2022.

———. *The Nation's Report Card: Mathematics 2024, Grade 4 and Grade 8*. Washington, D.C.: U.S. Department of Education. Accessed February 21, 2025.

Valant, Jon. *School Reopening Plans Linked to Politics Rather than Public Health*. Washington, D.C.: Brookings, July 29, 2020.

Vander Ark, Tom. "A Podpourri of Learning Options: Pods, Hubs, and Microschools in the Wake of the Pandemic." *Getting Smart*, February 23, 2022.

Wakelyn, David. "How 'Bright Spot' Schools in D.C., Delaware Are Getting Their Students Reading." *The 74 Million*, February 19, 2024.

Weddle, Hayley, Hashim, Ayesha K., and Irondi, Ogechi N. "How State Education Leaders Supported Students' Access to Education Amidst the COVID-19 Crisis: Lessons for Policy." *Educational Policy* 39, no. 2 (2025): 357–389. https://doi.org/10.1177/08959048231220374.

West, Martin R., and Robin Lake. *How Much Have Students Missed Academically Because of the Pandemic? A Review of the Evidence to Date*. Seattle, WA: Center on Reinventing Public Education, 2021.

Willse, Cadence. "State Education Agency Governance, Virtual Learning, and Student Privacy: Lessons from the COVID-19 Pandemic." *Educational Policy* 38, no. 1 (Los Altos, CA), February 17, 2023. https://doi.org/10.1177/08959048231153609.

Woo, Ashley, Rebecca L. Wolfe, Elizabeth D. Steiner, Sy Doan, Rebecca Ann Lawrence, Lisa Berdie, et al. *Walking a Fine Line—Educators' Views on Politicized Topics in Schooling.* Santa Monica, CA: RAND Corporation, 2022.

Woulfin, Sarah L., and Britney L. Jones. *Unprecedented and Unmasked: An Analysis of How District Policy Documents Frame Special Education During the COVID-19 Crisis*. Seattle, WA: Center on Reinventing Public Education, December 2021.

Zviedrite, Nicole, Ferdous Jahan, Sarah Moreland, Faruque Ahmed, and Amra Uzicanin. "COVID-19–Related School Closures, United States, July 27, 2020–June 30, 2022." *Emerging Infectious Diseases* 30, no. 1 (2024): 58–69. https://doi.org/10.3201/eid3001.231215.

Acknowledgments

CRPE and The Evidence Project team are particularly grateful to the countless researchers and scholars across the country who devoted their time to pandemic recovery research over the past five years. A special thank you to the experts who participated in our consensus panels and working groups; they assessed current research and recommended new lines of inquiry about the impacts of the Covid-19 pandemic on students. Their guidance has been invaluable.

Many thanks to the many past and current CRPE staff and external collaborators who contributed to the Evidence Project and our rapid response projects over the past five years. This project would not have been possible without you.

Several colleagues contributed to the writing of this report, including Lydia Rainey, Paul Hill, Robin Lake, Lisa Chu, and Daniel Silver. We would also like to thank the three external peer reviewers who ensured we captured all relevant research and suggested important clarifications. Thank you to Caitlin Lennon, Melissa Fall, and Emily Prymula for providing project management, editorial, and communications support.

This report is made possible by the Walton Family Foundation. The findings and conclusions contained within are those of the authors and do not necessarily reflect the positions or policies of the Foundation. Any omissions or errors are the authors' alone. More information about CRPE's work, including other extensive research reports, data, and resources, is available at www.crpe.org.

About the Center on Reinventing Public Education

The Center on Reinventing Public Education (CRPE) is a nonpartisan research organization at Arizona State University's Mary Lou Fulton College for Teaching and Learning Innovation. Since 1993, we have studied innovative, evidence-based solutions to improve public education. We believe public education is a goal—to prepare every child for citizenship, economic independence, and personal fulfillment—rather than a set of institutions. From this foundation, we strive to understand and advocate for necessary changes in policy and practice to meet the needs of every student.

CRPE

REINVENTING
PUBLIC EDUCATION

ASU Mary Lou Fulton College for Teaching and Learning Innovation
Arizona State University

crpe.org