

FEATURE

Smart Strategies for Investing Covid-Relief Federal Funding

18 Evidence-Based Practices from FutureEd

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Public schools reopened across the country this fall intent on helping students make up for the learning opportunities they have missed during the coronavirus pandemic. Key to that effort is an unprecedented infusion of federal money—totaling nearly \$190 billion in three rounds of congressional funding (*Exhibit 1*)—that states, school districts, and charter schools are using to keep classrooms safe and to accelerate student learning.¹ Education leaders face three key challenges in deploying this federal money: to spend it wisely, in ways that

promote academic and social-emotional growth; to spend it sustainably, recognizing that the last of the federal aid must be obligated by September 2024; and to spend it legally, within the spirit and letter of federal law.

FutureEd has researched a number of strategies that are proven to help students recover academically, that are financially viable, and that fit within the legal requirements for the federal spending.² We identified four key, interconnected priorities that districts should pursue:

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Exhibit 1 FEDERAL COVID-RELIEF PACKAGES

Federal Covid-Relief Packages

Totaling \$190 Billion

CARES Act

Approved in March 2020, this package provided \$13 billion for K-12 schools, much of which has already been spent. The money, known as ESSER I, must be obligated by September 2022. Approved in December 2020, this measure provides \$54 billion for K-12 schools. This ESSER II money must be obligated by September 2023.

CRRSA

American Rescue Plan

Approved in March 2021, the stimulus package provides \$123 billion for K-12 schools—20% of which must be spent to address learning loss. This ESSER III money must be obligated by September 2024.

Source: FutureEd.

- **Expand Time for Learning:** Provide more time for learning, both through summer and extended-day programs and through individualized attention in tutoring and mentoring efforts
- **Student and Family Engagement:** Help students and families reengage with school through home visits, more intensive data tracking, and collaborations with community organizations
- School Climate: Create a welcoming school climate, with teachers equipped to deal with the trauma and isolation students experienced, an equitable approach to discipline, and attention to students' mental and physical health
- **Teachers and Teaching:** Support the teacher workforce and improve what's taught in schools by creating a diverse workforce, adjusting mindsets about student achievement, and getting good teachers and good curricular materials into every classroom

The relief dollars for public schools, known as the Elementary and Secondary School Emergency Relief funding (ESSER), began flowing shortly after the passage of the CARES Act in late March 2020. With schools shuttered for an indeterminate period of time, states and districts spent much of the \$13 billion to provide devices and broadband access to students learning at home. Many districts also invested in the personal protective equipment and cleaning supplies needed to reopen schools safely, according to a survey by the International Association of School Business Officers.³

By the time Congress passed a second, \$54 billion round of funding for public schools in December 2020, concerns had shifted to lagging academic results and spiraling chronic absenteeism. The trends were worse for students from disadvantaged backgrounds, exacerbating achievement gaps with their more affluent peers. Recognizing this, Congress's third round of funding in March 2021, the American Rescue Plan (ARP), requires states and districts to spend a significant portion of the \$123 billion in ESSER funding on "evidence-based interventions" to address lost learning opportunities, with a focus on disadvantaged students. What does federal law mean by "disadvantaged students"? The ARP defines the term as including "low-income students, children with disabilities, English learners, racial and ethnic minorities, students experiencing homelessness, and children and youth in foster care." And what does it mean by "evidence-based"? Federal education law sets out four levels of research (*Exhibit 2*), ranging from interventions proven by randomly assigning students to those that simply "demonstrate a rationale" that they'll work.⁴ This gives districts wide latitude to help students recover academically and socially from the damage done by the pandemic. Implemented effectively, the proven practices listed below can provide substantial returns on educators' investments.

Expanding Time for Learning

1. Summer Learning

The ARP requires states to spend at least 1% of the money allotted for K-12 schools—about \$1.2 billion nationwide—for summer learning programs to help students make up lost instructional time. Research shows that well-designed summer programs can lead to gains in reading and math and support social-emotional development when students attend regularly. A Brown University meta-analysis of 37 studies of math summer programs estimates the payoff in student achievement gains may be 40% greater than the gains from reducing class sizes.⁵

RAND Corporation researchers concluded that **summer programs work best when they run at least five weeks and limit groups to 15 or fewer students.⁶ Programs should offer both academic and enrichment activities**, **provide transportation and food, and work with community organizations to encourage high attendance**.

2. Extended Day

Like summer learning, extended-day programs are a required, 1% expenditure for states under the ARP. Research shows that when students attend afterschool programs regularly, they make gains in academic performance, attendance, and social-emotional skills.⁷ Schools and districts should consider ways to increase participation, including partnering with community organizations and offering food, transportation, and other basic needs. Afterschool programs serving 10 to 20 students and offering 70 to 130 hours of additional instructional time annually are most effective.

3. Tutoring

With school districts required to spend at least 20% of their ARP allocation on learning recovery, tutoring is an essential strategy to boost academic achievement, socialemotional development, and other outcomes. A 2020 meta-analysis by the Abdul Latif Jameel Poverty Action Lab of 96 experiments determined the average effect of tutoring was equivalent to a student moving from the 50th percentile to nearly the 66th percentile of achievement.⁸

Exhibit 2 ESSA LEVELS OF EVIDENCE

Levels of Evidence

The federal Every Student Succeeds Act (ESSA) sets definitions for evidence-based practices when districts use federal funding, such as that provided by the American Rescue Plan, to improve schools.



Strong: Requires proof of a significant effect in at least one "gold standard" experimental study, a randomized control trial comparing the impact of an intervention on a randomly selected group of students to similar students who don't receive the intervention. Such studies must have at least 350 students in more than one location, without much attrition among participants.

Moderate: Requires a significant impact from a randomized control trial or a quasi-experimental study, one that compares equivalent groups but not in a random fashion with a large, multi-site sample.

Promising: Requires at least one well-designed and well-implemented study establishing a correlation to positive results without as much equivalence between groups. It can also include a randomized control trial or quasi-experimental study that did not involve a large enough sample.

Emerging: Requires a rationale or logic model based on research to suggest that the intervention could yield positive results, but rigorous evaluation has yet to be completed.

 $\textbf{Source:} Future Ed, \\ \underline{https://www.future-ed.org/wp-content/uploads/2021/06/Covid-Relief-Playbook.pdf.}$

Analysis from FutureEd, Education Reform Now, and the Center for American Progress found **tutoring is most effective when it occurs during the school day; includes at least three sessions a week for the entire year; involves groups of four or fewer students working with the same tutor; provides tutors with training, oversight, and clear lines of accountability; and uses materials aligned with research and state standards.**⁹

4. Mentoring

Like tutoring, mentoring programs can offer students a connection to a caring adult at school, a key to student success. The National Mentoring Resource Center describes mentoring as one-to-one, group, or team environments that offer activities aimed at improving academic performance, connection to school, attendance, and other personal goals. A 2021 study led by Brown University researcher Matthew Kraft found that having a school-based mentor, even an informal relationship, leads to better academic outcomes.¹⁰ A New York City program known as Success Mentors drew mentors from the school staff, community-based organizations, and, in some cases, older students.

In all cases, the results were strongest when mentors were in school at least three days a week; worked with a defined, managed caseload; had access to student data; and had a voice at a weekly principal-led meeting.¹¹ Covid-relief money could be used to launch a mentoring program and provide the necessary training and background checks.

5. Reducing Chronic Absenteeism

Since the start of the pandemic, student absenteeism rates have spiked, with the most vulnerable students missing far more school days than in years past.¹² The ARP stresses the importance of reducing chronic absenteeism so students can make up for lost instructional time. One messaging approach—attendance notifications, or "nudges"— has been found in two high-quality studies to reduce absenteeism and even course failures by letting parents know how many school days their children have missed.¹³ Attendance interventions work best in a tiered system of supports, with universal messaging and engagement initiatives aimed at the entire student body, more targeted approaches for students with challenges, and case management for students who need support from agencies beyond the schoolyard. In a recent guidance on spending Covid-relief aid, the Education Department stressed the need for data systems that track absences and monitor the results of interventions; federal funding can provide support to launch such systems and to train staff members to use them.

Student and Family Engagement

6. Home Visits

During the pandemic, home visits became an essential way for schools to connect with students and families, especially those disengaged from school. Research shows that home visits can improve attendance and achievement. An evaluation of the Parent Teacher Home Visits program found that students whose families received at least one teacher visit a year were 21% less likely to be chronically absent than other students.¹⁴ Beyond the pandemic, home visits can be part of a shift toward engaging families as full partners in education.

Home visits entail some costs for training and compensating teachers for visits often outside of school hours, expenses that Covid-relief money can support. The visits seem to work best with families of elementary school children and English language learners and when teachers and parents continue to interact after the initial visit.

7. Community Collaborations

The pandemic demonstrated the need for schools to collaborate with other government agencies and community organizations to deliver a full range of services to students and families. Covid-relief spending can support such collaborations, including data-sharing agreements. The Full-Service Community Schools model provides multi-agency wraparound services that essentially turn schools into hubs providing health, employment, and social services for the families. A 2020 RAND Corporation study found that a New York City community schools initiative led to reductions in chronic absenteeism in all grades and drops in disciplinary incidents at elementary and middle schools.¹⁵

These collaborative approaches work best with a school-based coordinator at the helm. Community schools are specifically mentioned in the American Rescue Plan and can also be funded with federal grants available under the Every Student Succeeds Act.

8. Early Warning Systems

To ensure the federal funds support the students who need help most, districts need reliable ways to track student progress. Researchers in Chicago and Baltimore have identified three signs that students are headed off track for graduation: chronic absenteeism, suspensions for misconduct, and failure rates in key courses. The Regional Education Laboratory Midwest and American Institutes for Research found that after one year of tracking these indicators in an early warning system, schools had a four percentage-point drop in the number of chronically absent students and a five percentage-point drop in course failures, compared to schools without the system.¹⁶

Covid-relief dollars can be used to set up and manage systems and train staff members to interpret data. Districts should dedicate staff to the project who have experience using data or should partner with a local university. Each school should create an early warning team to review the data at least every two weeks and recommend action to support students. districts choose an intervention or social-emotional learning program, they should assess the needs of their students and staff through school climate surveys or other instruments.

10. Mental Health Interventions

Schools and communities have noted a rise in mental health concerns among students, including higher rates of depression and anxiety, and more students reporting feelings of fear and hopelessness. All three rounds of Covid-relief funding have recognized student mental health needs as a priority, and districts should invest federal aid into interventions and practices that best support these students.

Educators should also implement trauma-responsive teaching practices and other whole-school strategies, such as Positive Behavioral Interventions and Supports. Schools can also invest in professional development to promote teacher awareness of mental health challenges and training on how to support students.

11. Equitable School Discipline

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School Climate

9. Student Motivation

The pandemic has left many students disconnected from school and apathetic about learning. A key challenge in the new school year will be motivating these students to reengage with teachers, peers, and coursework. A 2017 RAND Corporation review identified 60 programs that can help students strengthen skills essential to academic motivation.¹⁷ These skills include the ability to assess themselves as learners, emotional regulation, and social interaction, which feed into a sense of connection and belonging at school. Before school Given the trauma and isolation students and staff have suffered during the pandemic, schools should develop a measured response to discipline. Studies show suspensions are correlated with lower student achievement, and that Black and Latino students have higher suspension rates than their White peers. Covid-relief money can be used to implement equitable school discipline practices and a

nonpunitive approach to conflict. An approach known as restorative justice has been shown to reduce suspension rates and improve school climate, in part by bringing students together in small groups to talk, ask questions, and air grievances.

Restorative practices are most effective when schools make a wholesale shift to that framework with strong buy-in from faculty and staff. The RAND Corporation recommends implementing practices that can be woven into the school day and providing teachers with mandatory professional development, as well as coaching and feedback.¹⁸

12. Facilities Upgrades

The pandemic has increased public awareness of the importance of good ventilation in schools, both to prevent the spread of the airborne coronavirus and to create an overall healthy learning environment. According to a 2020 U.S. General Accountability Office report, as many as 36,000 schools nationwide had inadequate heating, ventilation, and air conditioning systems pre-pandemic.¹⁹ Likewise, an estimated 400,000 schools and childcare facilities use lead pipes to deliver water, putting children at risk for lead exposure that can damage cognitive skills, according to the White House.²⁰ Many of these poorly equipped schools are in underserved communities.

Covid-relief money can be used for facilities upgrades to improve HVAC and address lead exposure issues; these types of capital projects require approval from state and federal authorities and must abide by rules on competitive bids and wages.

13. School-Based Health Services

As schools reopen, districts must continue to prevent the spread of Covid and cope with new and intensified health challenges related to the pandemic. Many students have missed regular checkups and have not received regular vaccinations against childhood diseases. Other students are struggling with anxiety and depression. **Beyond hiring nurses and psychologists, schools and districts can use federal relief money to expand access to health services by setting up fullservice clinics in schools or establishing telehealth systems that encompass phone calls with doctors or nurses, video-based e-visits, and online health questionnaires.**

One of the biggest challenges to both options is cost. Clinics rely on combinations of local, state, and federal dollars that are not guaranteed for the long term. Insurance reimbursements and Medicaid can supplement the clinics. Telemedicine can provide a more sustainable model, but often involves considerable start-up costs for buying equipment and ensuring adequate internet speed and bandwidth capabilities.

Teachers and Teaching

14. Innovative Staffing Models

With schools closed during the pandemic, many educators developed innovative strategies for delivering instruction.

Some created multi-teacher teams with one teacher leading the lessons and others working closely with struggling students. Others reorganized schedules to provide more time to collaborate on planning lessons and analyzing student work. While there's limited evidence on the newest innovations, a body of research shows the value of teacher collaboration and teamwork.²¹

Covid-relief funding could help districts bring these innovative models to more schools and train teachers on working within the new frameworks. Schools and districts should seek buy-in from educators before pursuing these approaches and, if necessary, adjust union contracts.

15. Teacher Mindset Training

Teachers' beliefs and biases about students' abilities have a profound impact on student wellbeing and achievement. Students who feel respected and supported demonstrate greater confidence in their ability to learn and are more motivated to tackle demanding classwork. For students transitioning back to classrooms and school routines, supportive relationships with teachers will be especially important. Several studies confirm the value of addressing teacher mindsets, including efforts to combat the myth of the "math person" and to adjust the way teachers discipline students and give feedback on assignments.²² **Districts can provide training on teacher mindsets and can strengthen student-teacher relationships by prioritizing such strategies as advisories and home visits.**

16. Diversifying the Teacher Workforce

Research shows that diversifying the teacher workforce produces positive outcomes for all students. For students of color, having a teacher of the same race or ethnicity has been shown to improve test scores and attendance and reduce suspension rates.²³ However, teachers of color account for only 20% of the public school workforce, while children of color accounted for half the student population.

Districts can invest in recruitment and retention strategies, including "grow-your-own" programs that help classified employees and aides transition into teaching.²⁴ These programs often coordinate with higher education institutions and community-based organizations to provide financial, academic, and social support.



17. Teacher Bonuses

Schools in low-income communities often face challenges holding on to high-quality teachers. Targeted bonuses, aimed at recruiting and keeping teachers in hard-to-fill positions and schools, have proven effective in improving instruction and achievement, according to a 2013 report sponsored by the U.S. Department of Education.²⁵ However, after the payments stop, retention rates fall.

Districts should consider using teacher bonuses to address high-priority but short-term instructional needs in low-income communities, such as additional math and reading specialists during the post-pandemic period.

18. High-Quality Curriculum

High-quality curricular materials in the hands of wellsupported teachers can have a powerful influence on learning outcomes. Research demonstrates that switching to a high-quality curriculum can boost student achievement more than other popular interventions, such as decreasing class size or offering teachers merit pay.²⁶ Moreover, upgrading instructional materials is a relatively low-cost, high-return investment.

Districts can use Covid-relief money to purchase materials and train teachers and staff to use them. The adoption of high-quality materials should be accompanied by curriculum-based professional development for teachers.

It's essential that schools and districts implement these interventions with equity in mind. Disadvantaged students—including those living in poverty, learning English, and identified with disabilities—have been particularly hard hit by the pandemic and the loss of learning opportunities. The federal Covid-relief aid, spent wisely on practices proven to make a difference for learning, can help students recover academically and socially. Spent sustainably, it can help address some of the longer-term challenges that have kept students from succeeding in the past. \blacklozenge To learn more about the interventions outlined here, please refer to Covid Relief Playbook: Smart Strategies for

Investing Federal Funding

produced by FutureEd with the support of the Carnegie Corporation, https://www.future-ed.org/covid-playbook

NOTES

- ¹ Phyllis W. Jordan, "What Congressional Covid Funding Means for K-12 Schools," *FutureEd*, August 24, 2021, <u>https://www.future-ed.org/what-congressional-covid-funding-means-for-k-12-schools/</u>.
- ² Phyllis W. Jordan, Brooke LePage, and Catherine Dragone, "Covid Relief Playbook: Smart Strategies for Investing Federal Funding," *FutureEd*, June 2021, <u>https://www.future-ed.org/covid-playbook/</u>.
- ³ International Association of School Business Officers, "ASBO International Report: How Are School Districts Investing Federal Emergency Relief Funds to Address COVID-19?," ASBO Global School Business Network, March 4, 2021, https://network.asbointl.org/communities/community-home/librarydocuments/ viewdocument?DocumentKey=afa1878a-a891-4d15-9535-fb2df2c1045c.
- ⁴ Nora Gordon, "Parsing the Evidence Requirements of Federal Covid Aid," *FutureEd*, June 3, 2021, <u>https://www.future-ed.org/parsing-the-evidence-requirements-of-federal-covid-aid/</u>.
- ⁵ Kathleen Lynch, Lily An, and Zid Mancenido, "The Impact of Summer Learning Programs on Low-Income Children's Mathematics Achievement: A Meta-Analysis" (EdWorkingPaper, Annenberg Institute at Brown University, 2021): 21–379, https://doi.org/10.26300/da7r-4283.
- ⁶ Jennifer Sloan McCombs, Catherine H. Augustine, John F. Pane, and Jonathan Schweig, Every Summer Counts: A Longitudinal Analysis of Outcomes from the National Summer Learning Project (Santa Monica, CA: RAND Corporation, 2020), https://www.rand.org/pubs/research_reports/RR3201.html.
- ⁷ The Wallace Foundation, Evidence-Based Considerations for COVID-19 Reopening and Recovery Planning: Afterschool Coordination Systems to Support Afterschool Programming (March 2021), <u>https://afterschoolalliance.org/documents/</u> <u>WallacePoundationBriefonImplementationConsiderationsforCoordinated</u> <u>AfterschoolSystems-March2021.pdf</u>.
- ⁸ Kimberly Dadisman and Caroline Garau, with Spencer Crawford and Vincent Quan, *The Transformative Potential of Tutoring for PreK-12 Learning Outcomes: Lessons from Randomized Evaluations*, J-PAL Evidence Review (Cambride, MA: Abdul Latif Jameel Poverty Action Lab, 2020), https://www.povertyactionlab.org/publication/ transformative-potential-tutoring-pre-k-12-learning-outcomes-lessons-randomized; Jens Dietrichson, Martin Bog, Trine Filges, and Anne-Marie Klint Jørgensen, "Academic Interventions for Elementary and Middle School Students with Low Socioeconomic Status: A Systematic Review and Meta-Analysis," *Review of Educational Research* 87, no. 2 (April 2017): 243–82, https://doi.org/10.3102/0034654316687036.
- ⁹ Education Reform Now, The Education Trust, and FutureEd, "State Guidance for High-Impact Tutoring," May 2021, <u>http://edreformnow.org/wp-content/uploads/</u> 2021/05/State-Guidance-for-High-Impact-Tutoring-5.26-C.pdf.
- ¹⁰ Matthew A. Kraft, Alexander Bolves, and Noelle M. Hurd, "School-Based Mentoring Relationships and Human Capital Formation" (EdWorkingPaper, Annenberg Institute at Brown University, 2021): 21-441, <u>https://doi.org/10.26300/96bs-6m26</u>.
- ¹¹ Robert Balfanz and Vaughan Byrnes, "Using Data and the Human Touch: Evaluating the NYC Inter-agency Campaign to Reduce Chronic Absenteeism," *Journal of Education for Students Placed at Risk* (JESPAR) 23, issue 1-2 (2018): 107–121, <u>https://www.tandfonline.com/doi/abs/10.1080/10824669.2018.1435283</u>.
- ¹² Phyllis W. Jordan, "Present Danger: Solving the Deepening Student Absenteeism Crisis," *FutureEd*, May 24, 2021, <u>https://www.future-ed.org/present-danger-solvingthe-deepening-student-absenteeism-crisis/.</u>
- ¹³ Todd Rogers and Avi Feller, "Reducing Student Absences at Scale by Targeting Parents' Misbeliefs," *Nature Human Behaviour* 2 (April 23, 2018): 335–342, <u>https://scholar.harvard.edu/files/todd_rogers/files/rogers_sdp-final.pdf</u>; Peter Bergman and Eric W. Chan, "Leveraging Parents Through Low-Cost Technology: The Impact of High-Frequency Information on Student Achievement," *Journal of Human Resources* 56, no. 1 (2021): 125–158, <u>http://jhr.uwpress.org/content/early/</u> 2019/07/02/jhr.56.1.1118-9837R1.abstract.
- ¹⁴ Philip J. Cook, Kenneth A. Dodge, Elizabeth J. Gifford, and Amy B. Schulting, "A New Program to Prevent Primary School Absenteeism: Results of a Pilot Study in Five Schools," *Children and Youth Services Review* 82 (September 13, 2017): 262–270, https://www.sciencedirect.com/science/article/abs/pii/S0190740917305509.

¹⁵ William R. Johnston, John Engberg, Isaac M. Opper, Lisa Sontag-Padilla, and Lea Xenakis, Illustrating the Promise of Community Schools: An Assessment of the Impact of the New York City Community Schools Initiative (RAND Corporation, 2020), https://www.rand.org/pubs/research_reports/RR3245.html.

COVID RELIEF PLAYBOOK

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- ¹⁶ Ann Marie Faria, Nicholas Sorensen, Jessica Heppen, Jill Bowdon, Suzanne Taylor, Ryan Eisner, and Shandu Foster, *Getting Students on Track for Graduation: First-Year Impact of an Early Warning Intervention and Monitoring System* (REL 2017–272) (Washington, D.C.: Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest, 2017), <u>https://www.air.org/resource/ report/getting-students-track-graduation-impacts-early-warning-interventionand-monitoring.</u>
- ¹⁷ Sean Grant, Laura S. Hamilton, Stephani L. Wrabel, Celia J. Gomez, Anamarie Whitaker, Jennifer L. Leschitz, Faith Unlu, Emilio R. Chavez- Herrerias, Garrett Baker, Mark Barrett, Mark Harris, and Alyssa Ramos, *Social and Emotional Learning Interventions Under the Every Student Succeeds Act* (RAND Corporation, 2017), https://www.rand.org/content/dam/rand/pubs/research_reports/RR2100/ RR2133, PAND_RR2133.pdf.
- ¹⁸ Catherine H. Augustine, John Engberg, Geoffrey E. Grimm, Emma Lee, Elaine Lin Wang, Karen Christianson, and Andrea A. Joseph, Can Restorative Practices Improve School Climate and Curb Suspensions? An Evaluation of the Impact of Restorative Practices in a Mid-sized Urban School District (RAND Corporation, 2018), https://www.rand.org/pubs/research_reports/RR2840.html.
- ¹⁹ U.S. Government Accountability Office, K-12 Education: School Districts Frequently Identified Multiple Building Systems Needing Updates or Replacement (Washington, D.C.: U.S. Government Accountability Office, 2020), <u>https://www.gao.gov/products/gao-20-494</u>.
- ²⁰ Wallace Foundation, Evidence-Based Considerations for COVID-19 Reopening and Recovery Planning.
- ²¹ Matt Kraft, David Blazar, and Dylan Hogan, "The Effect of Teacher Coaching on Instruction and Achievement: A Meta-Analysis of the Causal Evidence," *Review of Educational Research* 88, no. 4 (2018): 547–588, <u>https://scholar.harvard.edu/files/ mkraft/files/kraft_blazar_hogan_2018_teacher_coaching.pdf.</u>
- ²² Craig Wacker and Lynn Olson, "Teacher Mindsets: How Educators' Perspectives Shape Student Success," *FutureEd*, June 2019, <u>https://www.future-ed.org/</u> wp-content/uploads/2019/06/Final-report_Teacher-Mindsets.pdf.
- ²³ Seth Gershenson, Cassandra M. D. Hart, Joshua Hyman, Constance Lindsay, and Nicholas W. Papageorge, "The Long-Run Impacts of Same-Race Teachers" (NBER Working Paper no. 25254, November 2018; revised February 2021), <u>https://</u> www.nber.org/system/files/working_papers/w25254/w25254.pdf; Christopher Redding, "Changing the Composition of Beginning Teachers: The Role of State Alternative Certification Policies," *Educational Policy* (May 2021), <u>https://journals.</u> sagepub.com/doi/abs/10.1177/08959048211015612.
- ²⁴ Jenny Muñiz, "Investing in Grow Your Own Teacher Programs: Leveraging State-Level Competitive Grants to Promote Quality," *New America* (August 2020), <u>https://dly8sb8igg2f8e.cloudfront.net/documents/Investing_in_Grow_Your_Own_ Teacher_Programs_Final.pdf.</u>
- ²⁵ Steve Glazerman, Ali Protik, Bing-ru Teh, Julie Bruch, and Jeffrey Max, Transfer Incentives for High-Performing Teachers: Final Results from a Multisite Randomized Experiment (Washington, D.C.: U.S. Department of Education's Institute of Education Sciences, 2013), <u>https://ies.ed.gov/ ncee/pubs/20144003/pdf/20144003.pdf</u>.
- ²⁶ Julia H. Kaufman, Sy Doan, Andrea Prado Tuma, Ashley Woo, Daniella Henry, and Rebecca Ann Lawrence, How Instructional Materials Are Used and Supported in U.S. K-12 Classrooms: Findings from the 2019 American Instructional Resources Survey (RAND Corporation, 2020), <u>https://www.rand.org/pubs/research_reports/RRA134-1.html</u>.