School districts across the United States have had to make many difficult decisions to prepare for the 2020–2021 school year amid the ongoing coronavirus disease 2019 (COVID-19) pandemic. A seemingly impossible dilemma dominated planning: Should schools reopen buildings to provide much-needed in-person instruction but potentially risk the health of students and staff? Or should schools keep buildings closed to lower health risks but risk the most-vulnerable students falling even further behind?

District decisions likely have hinged on numerous factors, including guidance from state officials, local COVID-19 infection rates, local population density, student needs, technology access, parent preferences, and state- and national-level political context (for evidence on the relationship between political factors and public schools’ responses to the pandemic, see Hartney and Finger, 2020; and Valant, 2020).

Data from before the school year began provide information about schools’ reopening plans. As of August 21, 2020, slightly less than half of a nationally representative sample of districts were planning to use either fully remote or hybrid instructional models (Gross, Opalka, and Gundapaneni, 2020). Similarly, of the 900 public school districts (about 7 percent of all school districts in the United States) tracked by Education Week at the beginning of the school year.
school year, about half opened with fully remote instruction and about one-quarter were providing fully in-person instruction ("School Districts’ Reopening Plans: A Snapshot," 2020). In addition, several sources have been tracking state-level messaging to districts and policies regarding their fall 2020 school plans (Jochim, Gill, and Lake, 2020; “Map: Where Are Schools Closed,” 2020).

However, until now little information has been gathered directly from teachers and principals about what is happening on the ground, their perceptions of how students are faring, and which students they feel are most at risk of falling behind. In this Data Note, we summarize selected findings on teaching and learning in the face of a pandemic by drawing on surveys administered via the RAND American Educator Panels (AEP) to nationally representative samples of K–12 teachers and principals in early October 2020. The AEP’s high-quality, probability-based sampling and weighting procedures enable us to provide the first nationally representative data on teacher and principal perceptions of the 2020–2021 school year.

We highlight only a subset of key findings in this Data Note; accompanying technical documentation (Kaufman et al., 2020) provides nationally representative totals for all survey questions administered to teachers and principals. All differences highlighted in this report are statistically significant ($p < 0.05$). Additional topics addressed in the surveys that are not covered in this report include schools’ health and safety procedures, staff vacancies and shortages, and schools’ budget constraints. The accompanying technical documentation also includes responses for those in schools serving at least 50 percent Black or Hispanic students, as well as schools serving 50 percent or more students who qualify for free or reduced-price lunch (FRPL).

In this report, we define the highest-poverty schools as those with 75 percent or more of students eligible for FRPL. We define highest-minority schools as those with 75 percent or more non-White students.

What Does Teaching and Learning Look Like in Fall 2020?

According to our spring 2020 surveys (Hamilton, Kaufman, and Diliberti, 2020), although basically all schools in the United States had transitioned to some form of remote learning by the end of March, student learning was limited after school buildings physically closed. Only 59 percent of teachers reported that they had been able to contact all or nearly all of their students, and 17 percent indicated that they were not providing any feedback on students’ work. Teachers in schools serving more low-income students and minority students were less likely to report being able to contact all or nearly all of their students and less likely to report teaching mostly new content. They also were less likely to report having the ability to support their students in a variety of other ways compared with teachers in schools serving lower proportions of low-income and minority students.

Educators’ responses to October 2020 surveys indicate that the COVID-19 pandemic continues to limit students’ learning, particularly among the most vulnerable student subgroups.

Most schools are still providing either wholly or partially remote instruction (Figure 1). Only 20 percent of principals reported that the majority of their students were receiving fully in-person instruction each school day. Thirty-three percent reported providing fully remote instruction, and 47 percent reported using a hybrid model (a combination of remote and in-person instruction). Principals in the highest-poverty schools and in schools serving the highest percentages of minority students were less likely to report offering in-person instruction. Conversely, principals in small school districts (fewer than 3,000 students) and in towns and rural areas were more likely to report providing in-person instruction. Of those who adopted a hybrid model, 50 percent reported using a split schedule, in which students attend in-person sessions on alternate days. The second-most-common approach (41 percent) was in-person teaching for students with special needs, such as English language learners and students with learning disabilities. We do not know whether these
Schools were providing fully remote instruction to students without special needs.

According to teachers, students are less prepared to participate in grade-level work this school year (relative to last school year), but it is likely that few students are getting the extra support they need to close the gap. Sixty-six percent of teachers reported that the majority of their students were less prepared to participate in grade-level work during the 2020–2021 school year relative to this time last school year; 27 percent indicated that a majority of their students were significantly less prepared than they were last year. We observed the following inequities in students’ preparedness:

- Thirty-three percent of teachers in the highest-poverty schools said that their students were significantly less prepared than last school year, compared with only 16 percent of teachers serving in schools with fewer than one-quarter FRPL-eligible students.
- Thirty-one percent of teachers in schools with a student population composed of three-quarters or more minority students said that their students were significantly less prepared than last school year. In comparison, only 22 percent of teachers serving in schools with fewer than one-quarter minority students said that their students were significantly less prepared.

### FIGURE 1
Disparities Exist in Which Students Receive Remote Instruction

<table>
<thead>
<tr>
<th></th>
<th>Fully in-person</th>
<th>Hybrid</th>
<th>Fully remote</th>
</tr>
</thead>
<tbody>
<tr>
<td>All schools</td>
<td>20%</td>
<td>47%</td>
<td>63%</td>
</tr>
<tr>
<td>Highest-poverty schools</td>
<td>11%</td>
<td>30%</td>
<td>33%</td>
</tr>
<tr>
<td>Highest-minority schools</td>
<td>7%</td>
<td>33%</td>
<td>56%</td>
</tr>
</tbody>
</table>

NOTE: This figure is based on the following survey question to school principals: “Which of the following most closely reflects how instruction is provided to students at your school as of today?” Principals were asked to select from the following response options: “Fully remote instruction, where a large majority or all students receive at least one synchronous class each school day”; “Fully remote instruction, where a large majority or all students receive less than one synchronous class each school day (i.e., instruction might be distributed via paper workbooks or asynchronous videos)”; “Hybrid model, where a majority or all students receive some in-person instruction and some remote instruction”; and “Fully in-person instruction each school day for the majority, if not all, students.”
Despite teachers’ agreement that students were generally less prepared than in previous school years, only 10 percent of principals indicated that their school was providing more students with tutoring or supplemental courses than last school year.

**Students are likely less accountable than they would be during a normal school year.** Only 59 percent of teachers reported that they were assigning letter grades during fall 2020, although that was nearly double the percentage of teachers who reported assigning letter grades in spring 2020 (35 percent; Hamilton et al., 2020). Secondary teachers were far more likely to report assigning letter grades than elementary teachers were (75 percent versus 41 percent).

A majority of teachers (55 percent) reported providing mostly or all new content to students; about 45 percent reported that half or more of their instruction thus far was review, although we do not know the time that these teachers spent on review during typical school years. However, only 19 percent of teachers said that they had covered nearly all or all of the curriculum content that they would have covered by this time last school year, whereas most teachers (56 percent) indicated covering half or less of the curriculum content they had covered by this time last year.

Furthermore, according to teachers, only 69 percent of students had completed most or all of their assignments so far. The percentage of students completing assignments varied substantially across school demographics and the instruction model used this school year (Figure 2); some of this variation likely was related to prepandemic differences.

**Teachers have not been able to contact all their students, especially in schools without in-person instruction.** On average, teachers reported being able to contact only four out of every five students. Teachers with in-person classes reported being in contact with slightly higher percentages of students than teachers providing hybrid instruction. Elementary teachers reported being in contact with many more students on average than secondary teachers.

Additionally, teachers in our survey reported that, on average, only 86 percent of students were present each school day this fall. Teachers providing in-person instruction estimated that 91 percent of their students were typically present each day, compared with 84 and 85 percent—respectively—for those providing fully remote and hybrid instruction. In comparison, according to recent data from the National Center for Education Statistics (NCES) School Survey on Crime and Safety (NCES, undated), the average daily attendance rate in U.S. schools during the 2015–2016 school year was about 94 percent; average daily attendance rates during the past decade have typically been between 90 and 95 percent (NCES, 2018).

**How Are Teachers Coping with the Changing Educational Landscape?**

In our spring surveys, slightly more than half of teachers said that feelings of burnout were a moderate or major concern (Hamilton et al., 2020). Another late-summer survey of educators raised increasing concerns about teachers’ morale as the 2020–2021 school year began (Kurtz, 2020). Our fall 2020 AEP surveys largely confirm these findings.

**High percentages of teachers are reporting burnout and higher likelihood of leaving the teaching profession.** More than half of teachers (57 percent) reported working more hours per week during this school year than they did before the COVID-19 pandemic. Teachers in the lowest-poverty schools were more likely to report working more hours per week during the pandemic than teachers in the highest-poverty schools. Some 80 percent of teachers reported feelings of burnout as a moderate or major concern. Overall, about one-quarter of teachers indicated that they were likely to leave the teaching profession; the large majority of those teachers indicated that they had been unlikely to leave before the pandemic.

**A majority of teachers are dissatisfied with or have mixed feelings about their schools’ or districts’ decisions about remote or in-person learning.** Slightly more than one-third of teachers
reported being satisfied or highly satisfied with the decisions that their schools or districts had made regarding remote and in-person learning; slightly more than a quarter reported being dissatisfied, with the rest reporting mixed feelings. Teachers in large school districts were especially likely to report dissatisfaction. Dissatisfaction was also higher among teachers providing hybrid instruction (33 percent) than among those providing in-person (21 percent) instruction.

What Additional Challenges Do Educators Report and What Supports Do They Need?

Access to digital devices and the internet continues to be a problem for some schools and students. Principals in schools with remote instruction reported higher proportions of students with access to digital devices and adequate internet than those in schools with in-person instruction. Principals in schools with in-person classes reported that 87 percent of their students, on average, had access to a digital device and 82 percent had adequate internet access. In comparison, principals in schools that were fully remote or using a hybrid model reported that an average of 95 and 91 percent, respectively, of their students had access to digital devices at home and 87 and 85 percent, respectively, had adequate internet.

Although home internet access and digital devices appeared to be more prevalent in schools providing remote instruction, compared with those providing in-person instruction, the percentages indicating the presence of this technology remain below the universal coverage necessary to

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**FIGURE 2**

**Instruction Model and Demographic Factors Affect Teachers’ Reports of Student Assignment Completion**

<table>
<thead>
<tr>
<th>Instructional model</th>
<th>Fully in-person versus fully remote</th>
<th>Elementary versus secondary</th>
<th>Rural versus city</th>
<th>Lowest-poverty versus highest-poverty</th>
<th>Lowest-minority versus highest-minority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of students reported to have completed most or all assignments</td>
<td>82% 62%</td>
<td>72% 67%</td>
<td>74% 64%</td>
<td>78% 61%</td>
<td>75% 61%</td>
</tr>
</tbody>
</table>

NOTE: This figure is based on the following survey question to teachers: “Approximately what percentage of your students have completed all or almost all of your assignments so far this school year (2020–2021)?” The figure presents the average percentage of students completing assignments reported by teachers in each subgroup. There was a significant difference (p < 0.05) between all subgroup comparisons.
support remote instruction. This lack of universal coverage likely affects students in poverty the most. Specifically, principals in the highest-poverty schools—which were more likely to be fully remote than their lower-poverty counterparts—reported that only 80 percent of their students, on average, had adequate internet access at home.

**Schools are experiencing shortages of qualified substitute teachers this year because of COVID-19.** Nearly three-quarters of principals (74 percent) reported that their schools are experiencing a shortage of qualified substitute teachers because of COVID-19. Principals in schools providing in-person instruction this fall were far more likely than those providing remote instruction to indicate a substitute teacher shortage (82 versus 60 percent, respectively). Principals in the highest-poverty and highest-minority schools (which are less likely to offer in-person classes, as noted earlier) were less likely to say the pandemic has caused a substitute teacher shortage compared with principals in lower-poverty schools and schools with fewer minority students. Despite consensus among a large percentage of principals regarding shortages of qualified substitute teachers, only one in five principals said their school had a shortage of qualified teachers because of the pandemic.

**Teachers providing remote instruction are not receiving adequate guidance and support from their school systems to address special learning needs.** Of teachers who work with these student populations, about half or more of teachers providing remote instruction reported that they had not received adequate guidance to support students with severe disabilities, students experiencing homelessness, students affected by poverty, and English language learners. Remote teachers were far more likely than those teaching in-person to report that they had not received adequate guidance to help their most vulnerable students, but about one in three teachers teaching in-person also said that they had not received adequate support to help these students.

**Teachers providing fully remote instruction particularly need additional supports from school and district leaders (Figure 3).** Nearly four in ten teachers providing fully remote instruction said that they had a major or very major need for strategies to keep students engaged and help students catch up to grade level. Teachers in the highest-poverty and highest-minority schools were especially likely to report a major or very major need for strategies to help catch students up to grade level. Principals of schools providing fully remote instruction also reported greater needs for some supports than principals of schools offering in-person instruction, with about half indicating that they needed resources to help students address lost hands-on learning opportunities. Interestingly, principals of schools providing in-person classes still reported a major or very major need for training to support remote teachers, perhaps suggesting that these principals anticipate a shift back to remote learning in the coming months.

**Conclusions and Recommendations for the Rest of the School Year**

Our findings paint an alarming picture of how the 2020–2021 school year is unfolding. Even though teachers are working more hours than they were before the pandemic, students are likely not getting all the curriculum content and instruction that they would have received during a normal school year. All students—especially students receiving remote instruction—are absent more often than in a typical school year, and many are not completing all of their assignments.

Students from vulnerable populations might be particularly likely to slip through the cracks. As our previous report demonstrated, students who have historically been underserved by the education system—including students of color, lower-income students, and students with special needs—bore the brunt of the negative impacts of school closures last spring (Hamilton, Kaufman, and Diliberti, 2020). According to the October 2020 survey data, many of these vulnerable populations are more likely to be attending school remotely this year, even though they may be the least prepared to engage in grade-level work.
What’s more, high proportions of teachers report that they are not receiving adequate guidance to serve many of these populations—especially if they are teaching them remotely—and low percentages of principals indicate that their schools are offering the tutoring needed to help these students catch up. High percentages of teachers and principals, but especially those in schools providing only remote instruction, express a major or very major need for a range of resources, from instructional strategies and materials to counseling services for students.

These findings do not mean that there is one right path forward for every school. Although recent data from more than 8,000 U.S. schools suggests that schools may not be “super spreaders” of COVID-19 (Oster, 2020), some experts have noted these findings are likely not generalizable, given that many schools do not have robust data systems for tracking COVID-19 infection rates (Tatum, 2020). Furthermore, parents might have a variety of safety concerns—their own health, their children’s health, and various other factors—that would prevent them

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**FIGURE 3**

**Need for Supports Was Higher Among Remote-Only Teachers and Principals**

**Percentage Reporting Major or Very Major Needs**

<table>
<thead>
<tr>
<th></th>
<th>Teachers</th>
<th>Principals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategies to catch students up to grade level*</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td>Strategies to keep students engaged and motivated*</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td>Strategies to assess students’ academic learning*</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td>Access to high-speed internet from my home</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td>Strategies to adapt the curriculum I’m using*</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td>Up-to-date computer or tablet to use from my home*</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td>Social and emotional learning lesson plans or strategies</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td>Academic lesson plans*</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
</tbody>
</table>

**Training to support my teachers to deliver remote instruction**

<table>
<thead>
<tr>
<th></th>
<th><img src="image" alt="" /></th>
<th><img src="image" alt="Bar Chart" /></th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategies or resources to address the loss of students’ opportunities to engage in hands-on learning*</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td>High-quality materials to support social and emotional learning*</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td>Tools and resources to enable student engagement with counselors or school psychologists*</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td>Lifting of requirements regarding student attendance or instructional time</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td>High-quality materials to support academic instruction</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td>Opportunities to network and learn from other principals</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
<tr>
<td>Lifting of restrictions around the provision of remote instructional supports</td>
<td><img src="image" alt="Bar Chart" /></td>
<td><img src="image" alt="Bar Chart" /></td>
</tr>
</tbody>
</table>

NOTE: This figure is based on the following survey question asked to teachers and principals: “Please indicate your current level of need for additional support from school or district leaders in each of the following areas.” Response options were “no need,” “very minor need,” “minor need,” “moderate need,” “major need,” and “very major need.” * indicates a significant difference ($p < 0.05$) between educators in schools providing in-person instruction and educators providing fully remote instruction.
from wanting to send their children back to school regardless of infection rates.

There are no signs that the pandemic is slowing, and policymakers must act fast to ensure that the entire school year is not another one of its casualties. On the basis of our findings, we make the following recommendations.

**States and the federal government should be directing much more funding and resources to support schools delivering remote instruction—particularly if those schools are serving high-poverty and high-minority populations.** Remote student populations need adequate access to technology, and their teachers need more support. Furthermore, many students who are learning remotely likely will need more-intensive learning approaches (e.g., tutoring, one-to-one instructional opportunities). Most states do not have funding formulas or other support mechanisms to direct funding to these schools. Because some form of remote instruction will probably persist through the coming months, this needs to change.

**Making schools safer to attend in person should be a major priority for state and federal governments, as well as for school districts.** According to results noted in our technical documentation, schools are undertaking many safety precautions, with the most common precautions being masks and temperature checks (Kaufman et al., 2020, p. 21). New rapid testing kits, if used in tandem with other safety practices, could reduce the risk of COVID-19 transmission in schools. Collecting as much data as possible on schools’ safety precautions—and which precautions work—could help in the creation of clear federal and state school safety guidelines and supports for their adoption.

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**How This Analysis Was Conducted**

In this report, we used responses from nationally representative surveys of 1,082 K–12 public school teachers and 1,147 school principals administered via the AEP in October 2020 (for more information, see Kaufman et al., 2020). This report provides teacher and principal responses overall and, in selected cases, for specific subgroups when differences were substantive and significant. All data have been weighted to provide nationally representative estimates. To assess whether differences were statistically significant at the \( p < 0.05 \) level, we performed a series of Wald tests for each survey item that compared the weighted means of two subgroups at a time (e.g., in-person versus remote teachers, in-person versus hybrid teachers, remote versus hybrid teachers). Because the intent of this report was to provide descriptive information rather than to test specific hypotheses, no adjustments were made for multiple comparisons.

Data on school and student demographics were obtained by linking survey data files to the 2018–2019 Common Core of Data issued by the NCES. Our urbanicity definition aligns with the four-category locale definition used by NCES. We defined *small school districts* as those serving less than 3,000 students and *large school districts* as those serving 10,000 or more students. To analyze differences by the percentage of minority (non-White) students and the percentage of students eligible for FRPL that respondents’ schools served, we used the following categories: lowest (less than 25 percent), mid-low (25 to less than 50 percent), mid-high (50 to less than 75 percent), and highest (75 percent or more).

We relied on self-reported survey data from teachers and principals to categorize school grade levels. Educators in schools serving primarily kindergarten through 5th grade were placed in the elementary group; those serving 6th through 12th grade were placed in the secondary group. Educators serving an equal number of elementary and secondary grades were assigned to the secondary group.
Bibliography


NCES—See National Center for Education Statistics.


About the AEP Data Note Series

The AEP Data Note series is intended to provide brief analyses of teacher and school leader survey results of immediate interest to policymakers, practitioners, and researchers. If you would like to know more about the dataset, please visit COVID-19 and the State of K–12 Schools: Results and Technical Documentation from the Fall 2020 American Educator Panels COVID-19 Surveys (RR-A168-5, www.rand.org/t/RRA168-5) for more information on survey recruitment, administration, and sample weighting. If you are interested in using AEP data for your own surveys or analysis or reading other AEP-related publications, please email aep@rand.org or visit www.rand.org/aep.

About This Report

The American Educator Panels (AEP) are nationally representative samples of teachers and school leaders across the country.

We are extremely grateful to the U.S. public school teachers and leaders who have agreed to participate in the panels. Their time and willingness to share their experiences are invaluable for this effort and for helping us understand how to better support their hard work in schools. We thank Betheny Gross, Andrew McEachin, and Fatih Unlu for helpful feedback that greatly improved this report. We also thank Monette Velasco and Jessica Wolpert for their expertise in overseeing the publication and editing process for this report.

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More information about RAND can be found at www.rand.org. Questions about this report should be directed to mdiliber@rand.org, questions about the AEP COVID-19 surveys should be directed to jkaufman@rand.org, and questions about RAND Education and Labor should be directed to educationandlabor@rand.org.

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