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Flux in the Educator Labor Market: Acute Staff Shortages and Projected Superintendent Departures

Selected Findings from the Fourth American School District Panel Survey

Media accounts have described K–12 teaching staff shortages in 2021–2022 that were severe enough to temporarily close schools for in-person instruction in some areas (Heyward, 2021; Hughes, 2021). Although much has been written about the negative impacts of the coronavirus disease 2019 (COVID-19) pandemic on teachers (e.g., Liss-Levinson, 2021; Pressley, 2021; Steiner and Woo, 2021; Zamarro et al., 2021), less is known about the extent to which the pandemic is taking a toll on other types of educators, including superintendents. Researchers have rightly pointed out that school staff shortages vary by state, by teaching subject area, and even by school within a district (Goldhaber, 2021). Therefore, extrapolating from isolated instances and media reports and overlooking important differences among school districts can lead to incomplete and inefficient—or even counterproductive—policy responses to resolve staffing shortages.

Key Findings

- At least 60 percent of leaders from each district subgroup that we examined reported believing that the pandemic has caused a shortage of teachers, and nearly every district leader said the same about substitutes.
- Among the 25 different job categories that we asked about, shortages were most acute for substitutes, bus drivers, special education teachers, and paraprofessionals, as of November 2021.
- Most districts—but especially urban districts and those serving predominantly students of color—have increased the number of staff that they employ, raising our concerns about a fiscal cliff once federal stimulus funds end.
- Thirteen percent of superintendents left their jobs between the past school year and this one (2021–2022)—a rate that we believe reflects normal turnover. Half of surveyed superintendents said that they either would leave in the next few years or were unsure how long they would remain in their positions.

To obtain a national picture of the various types of staffing challenges that districts are facing in the 2021–2022 school year, we surveyed 359 district and charter network leaders in the American School District Panel (ASDP) between October 25, 2021, and December 10, 2021.¹ We refer to the survey as the November 2021 survey throughout this report for brevity.

The ASDP is a partnership among the RAND Corporation, the Center on Reinventing Public Education, Chiefs for Change, the Council of Great City Schools, and Kitamba. We use the terms *districts* and *district leaders in this report* to refer to both the 333 traditional public school district leaders who took the survey and leaders from 26 charter management organizations (CMOs). We weighted their responses to make them nationally representative of districts across the country. In this report, we describe only those differences among district subgroups that are statistically significant at the 5-percent level.

This is the second of two reports about the challenges that district leaders experienced at the beginning of the 2021–2022 school year. In our previous report, we examined superintendents’ concerns about mental health, which include the

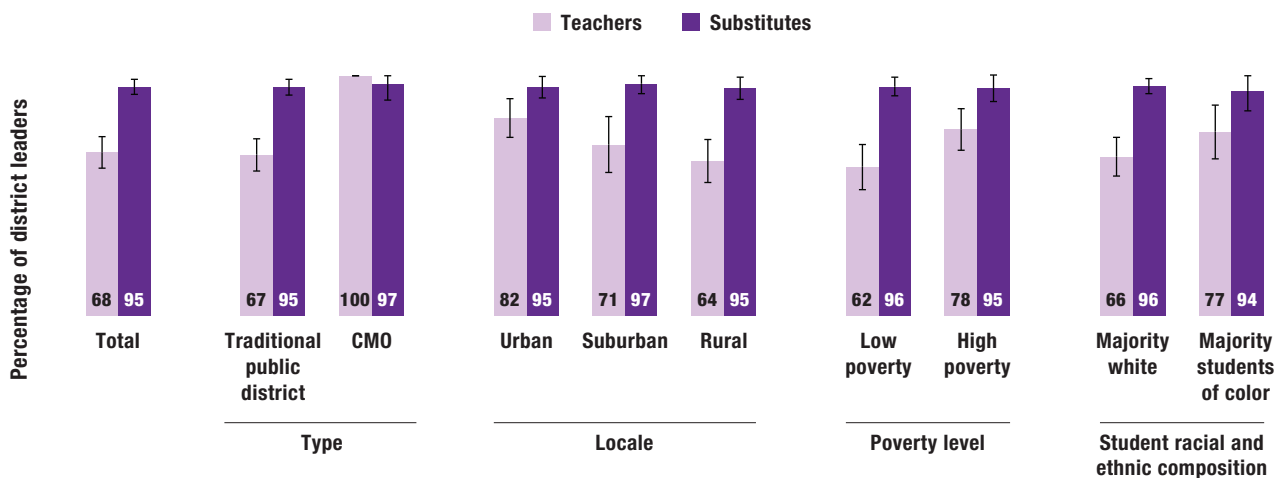
mental health of students and staff and the political polarization that is interfering with schooling (Diliberti and Schwartz, 2022).

Almost All District Leaders Said That the Pandemic Has Caused a Shortage of Substitutes in 2021–2022, While Two-Thirds Said the Same About Teachers

Virtually all district leaders across each type of district agreed that the pandemic has caused shortages of substitute teachers, confirming that the substitute teacher shortage is indeed a national problem (see Figure 1). The figure also shows that about two-thirds of leaders from each district subgroup that we examined also perceived a shortage of classroom teachers because of the pandemic. But, as the light purple bars show, regular teacher shortages varied more by district subgroup than did the shortage of substitute teachers. More CMOs, urban districts, and high-poverty districts reported pandemic-caused teacher shortages than did their traditional public, non-urban, and low-poverty counterparts.

FIGURE 1

Percentage of District Leaders Who Agreed or Strongly Agreed That the Pandemic Has Caused Shortages of Substitutes and of Teachers



NOTES: This figure depicts the percentage of district leaders who either agreed or strongly agreed with the statements “The pandemic has caused a shortage of teachers in my district/CMO” and “The pandemic has caused a shortage of substitute teachers in my district/CMO” ($n = 358$). The vertical black bars represent the 95-percent confidence interval for each estimate.

We hypothesize that the pandemic-induced shortage of regular classroom teachers in the 2021–2022 school year derives from several sources. The first is heightened teacher absences, which not only increase the need for substitutes but also might lead districts to expand the number of classroom teachers on staff to help cover absences. We hypothesize that heightened teacher absences stem from multiple sources, including increased rates of sickness, burnout, lack of child care, and hesitation to work in higher-risk settings during the pandemic. In this same November 2021 survey, 45 percent of district leaders reported “moderate” or “major” concerns about “low attendance among teachers” in fall 2021 (Diliberti and Schwartz, 2022). As many as 60 percent of leaders from urban districts and from districts serving mostly students of color had this concern—the same types of districts that were most likely to have agreed that the COVID-19 pandemic has caused a shortage of teachers.

A second reason for teacher shortages is that, although many schools might have already expanded the number of staff that they employ above prepandemic levels, many are still trying to add staff. Districts might want to hire additional teachers this school year to reduce class sizes, support extra push-in or pull-out services, hire in specialized areas, or provide extra tutoring. There is some evidence, in addition to our survey data, that districts are expanding staff for 2021–2022. For one, the number of job openings in educational services nationally is much higher than it has been in the previous two years.² Likewise, a September 2021 federal survey of 170 school leaders found that 38 percent of school leaders said that their school had more vacancies than in a typical year (Institute of Education Sciences, undated). In the same survey, 44 percent of these school leaders said that they had teacher vacancies because new teaching positions were created. Finally, as we note in our companion short report, the most common barrier that district leaders identified to spending excess federal funds for pandemic recovery is shortages of staff to hire (Diliberti and Schwartz, 2022).

A third reason for current teacher shortages is that districts might have experienced higher teacher attrition during the pandemic and might have fewer applicants to fill preexisting positions. Although research conducted thus far in the pandemic indicates that there has not been a mass exodus of teachers from the profession (Aldeman, 2022; Diliberti and Schwartz, 2021; Goldhaber and Theobald, 2021; Makkonen and Jaquet, 2021), data from the same federal survey mentioned earlier suggests that teacher attrition might be contributing to districts’ teacher shortages this school year (Institute of Education Services, undated). In that survey, seven out of ten school leaders said that teacher vacancies in 2021–2022 were because of teacher resignations, and five out of ten said that vacancies were because of teacher retirements. However, it is not clear whether this is a departure from typical, prepandemic levels of resignation and retirement.

Meanwhile, the pandemic has exacerbated the preexisting shortage of substitute teachers (Currence, 1985). Districts likely need a greater number of substitutes than usual both because of substitutes’ own heightened rates of sickness or unavailability and because of the heightened rate of absence among regular classroom teachers during the pandemic. However, retired teachers, who have been a traditional source of substitutes, have been less willing to work in this role during the pandemic (Will, 2021). Furthermore, school districts are competing with other employers amid an acute, national shortage of low-wage workers during the pandemic (Hoff and Kaplan, 2021; Lieberman, 2021). The reasons for the national shortage are numerous and complex, but particularly for low-wage workers who might work as substitute teachers, paraprofessionals, or bus drivers, the most-salient reasons for the shortage likely are the availability of higher-paying jobs elsewhere; concerns about higher COVID-19 health risks in school settings compared with other jobs; and a lack of child care, which prevents these workers from working outside the home (Reilly, 2021).

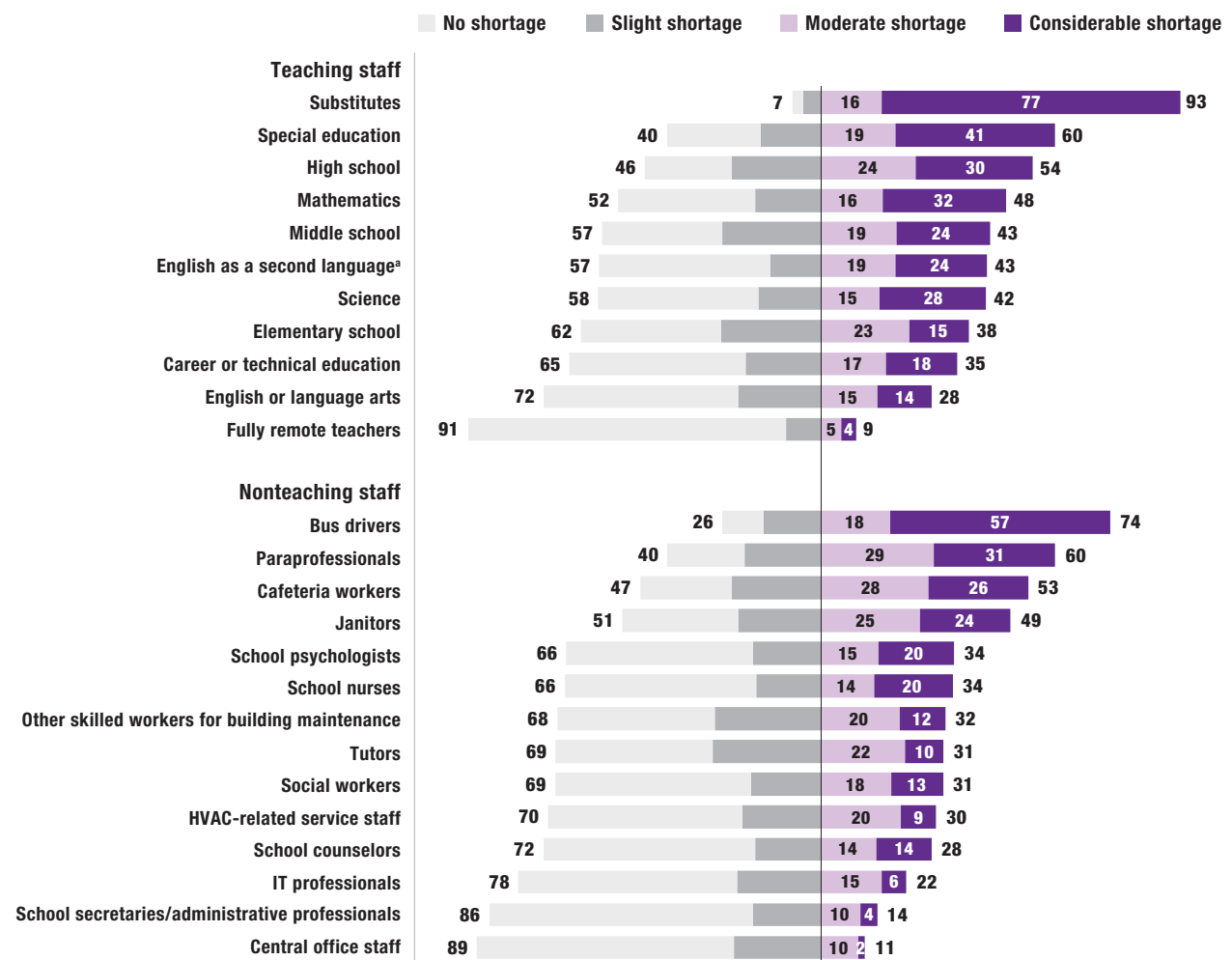
The Shortage of Staff in Fall 2021 Was Most Acute for Substitute Teachers, Followed by Bus Drivers, Special Education Teachers, and Paraprofessionals

To gain more-detailed information about shortages, we asked district leaders whether their districts were

experiencing shortages in the 2021–2022 school year for 11 different types of teaching positions and 14 types of nonteaching positions (Figure 2). On average, district leaders reported having either moderate or considerable shortages in nine of the 25 job categories that we listed, and 23 percent of district leaders reported experiencing moderate or considerable shortages in 15 or more of the 25 possible job categories.³

FIGURE 2

Percentage of District Leaders Reporting Levels of Staff Shortages as of Fall 2021



NOTES: This figure depicts response data from the following survey questions: “For which subject area(s), if any, does your [district/CMO] currently have teacher shortages?” “For which school level(s), if any, does your [district/CMO] currently have shortages of teacher shortages [sic]?” and “For which types of non-teaching staff does your [district/CMO] currently have shortages, if any?” (n = 349). This figure excludes respondents who said “not applicable” because they do not employ teachers in that subject area, teachers in that grade level, or nonteaching staff in that job category. Bars might not sum to 100 percent because of rounding. HVAC = heating, ventilation, and air conditioning. IT = information technology.

^a Includes bilingual education.

“We have hired [three] full-time certified substitutes to cover classes. This has served to help fill the gap, but we are still short-handed.”

— Rural school district leader

As shown in Figure 2, the single-greatest shortage was for substitutes, with 77 percent of district leaders reporting a “considerable” shortage as of fall 2021 and an additional 16 percent reporting a “moderate” shortage. Note that we do not know whether these shortages are worse in these districts than they were before the pandemic began.

After substitutes, the next-largest categories of teacher shortages were in special education, high school, and mathematics. These categories largely align with what district leaders projected back in February 2021 for the 2021–2022 school year (Schwartz et al., 2021) and with other research examining staff shortages during the pandemic era (Goldhaber and Gratz, 2021). These positions also are historically some of the hardest to staff (Barnum, 2021; Boe, 2006; National Center for Education Statistics, undated-a; Sutchter, Darling-Hammond, and Carver-Thomas, 2016).

Among nonteaching staff, shortages of bus drivers topped the list (74 percent of district leaders reported a moderate or considerable shortage), followed by paraprofessionals (60 percent), and cafeteria workers (53 percent). These findings are also consistent with historic shortages for bus drivers (Cook, 2019; Feinberg, 2019), district leaders’ reports in February 2021 (Schwartz et al., 2021), and widespread shortages of low-wage workers generally in 2021 (Bureau of Labor Statistics, 2021a; Henderson, 2021).

Larger Percentages of Leaders in Urban Districts, High-Poverty Districts, and Majority-Students of Color Districts Reported Acute Staff Shortages in Fall 2021 Than Their Peers

On average, district leaders reported having “considerable” shortages in five of 25 job categories that we listed. In Figure 3, we examine which types of districts experienced the most-significant shortages across job categories, listing only those job categories for which at least 20 percent of leaders from at least one district subgroup indicated a considerable shortage. Nineteen of the 25 job categories meet this threshold (see Figure 3).

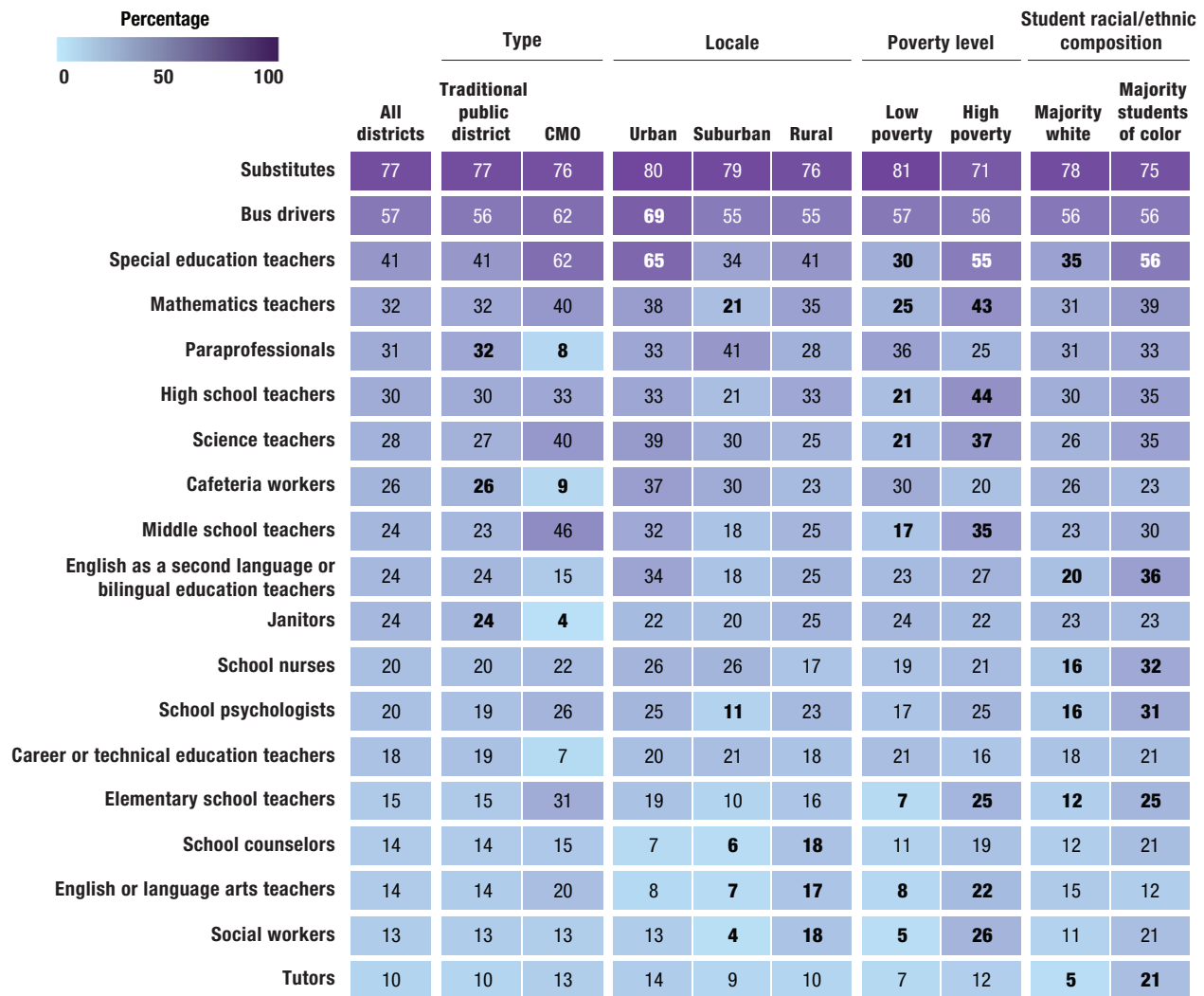
About three-quarters of leaders across all nine district subgroups reported a considerable shortage of substitute teachers, as seen in the first row of Figure 3. Higher percentages of leaders in urban districts, high-poverty districts, and majority-students of color districts reported considerable shortages of several types of staff compared with their counterparts. For example, 69 percent of urban leaders reported a considerable shortage of bus drivers compared with 55 percent of their suburban and rural district peers. Note that there is considerable overlap among urban, high-poverty, and majority-students of color districts, as shown in Box 1.

High-poverty districts were more likely than low-poverty districts to experience considerable shortages in fall 2021 in what have long been hard-to-staff areas: special education, high school, math, and science (Barnum, 2021; National Center for Education Statistics, undated-a; Sutchter, Darling-Hammond, and Carver-Thomas, 2016). However, these heightened shortages extend to other positions as well, such as elementary teachers, English language arts teachers, and social workers.

Special education teachers are in particular shortage for urban districts, high-poverty districts, and majority-students of color districts. This, too, has been a hard-to-staff area since before the pandemic, and demand for special education teachers

FIGURE 3

Percentage of District Leaders Who Reported Considerable Shortages for Various Staff Categories in Fall 2021



NOTES: This figure depicts response data from the following survey questions: “For which subject area(s), if any, does your [district/CMO] currently have teacher shortages?” “For which school level(s), if any, does your [district/CMO] currently have shortages of teacher shortages [sic]?” and “For which types of non-teaching staff does your [district/CMO] currently have shortages, if any?” This figure excludes respondents who said “not applicable” because they do not employ teachers in that subject area, teachers in that grade level, or nonteaching staff in that job category. This figure includes only teaching and nonteaching categories for which at least 20 percent of respondents in at least one district subgroup said that they have “considerable” shortages ($n = 349$). Values shown in bold indicate that the subgroup percentage of district leaders reporting a considerable shortage is statistically significantly different ($p < 0.05$) from the remainder of district leaders not in that subgroup who said the same.

has been highest in high-poverty districts both before and during the pandemic (Boe, 2006; Sutchter, Darling-Hammond, and Carver-Thomas, 2016).

Districts Across the Country, but Especially Urban Districts and Those Serving Mostly Students of Color, Have Expanded the Number of Hires in 2021–2022 Above Prepandemic Levels

In November 2021, we posed the following question to district leaders: “For each of the following staff categories, please indicate whether your district/CMO has expanded hires by *either contracting or directly employing them* for this school year (2021–2022).” To attempt to measure whether districts are expanding staff above prepandemic levels, we asked respondents to select one of the following four response options to this question:

- “We haven’t expanded hires.”
- “We primarily expanded hires since the onset of the pandemic by increasing the number of district-employed staff.”
- “We primarily expanded hires since the onset of the pandemic by increasing the number of contracted staff.”
- “We don’t employ staff in this position.”

In practice, survey respondents might have interpreted this survey item in one of two ways. For those who reported expanded hires, respondents might have indicated as such because they either increased the total number of employees in the given job category or expanded hiring to fill a higher-than-normal number of vacancies and thus kept the total number of employees unchanged. In our analysis, we interpret survey responses in the first way—as an increase in the total number of school employees above prepandemic levels, because this is how we intended this survey question to be interpreted. However, we temper our conclusions about hiring because of

“We have hired district-wide social workers and instructional coaches. Additionally, we have added [science, technology, engineering, and math (STEM)] teachers at all seven of our elementary schools. It is our plan to incorporate these positions into our budget going forward.”

— Urban school district leader

the ambiguity of the survey question. The survey question listed 12 job categories, which we display in Figure 4. Note that we did not list classroom teachers in the November 2021 survey because we had asked about expanded hiring in that job category for the 2021–2022 school year in our June 2021 survey of district leaders (Diliberti and Schwartz, 2021); however, we include those earlier results in Figure 4 for comparison purposes.

All told, 88 percent of district leaders said that they had expanded their hiring of one or more of the 12 nonclassroom teacher roles, either by hiring more district staff or by employing contractors. Figure 4 shows that more than half of districts expanded the number of hires for substitutes and paraprofessionals in 2021–2022 above prepandemic levels. Between 30 and 45 percent of districts expanded the number of hires for school counselors, social workers, virtual school teachers, school nurses, and tutors above prepandemic levels.

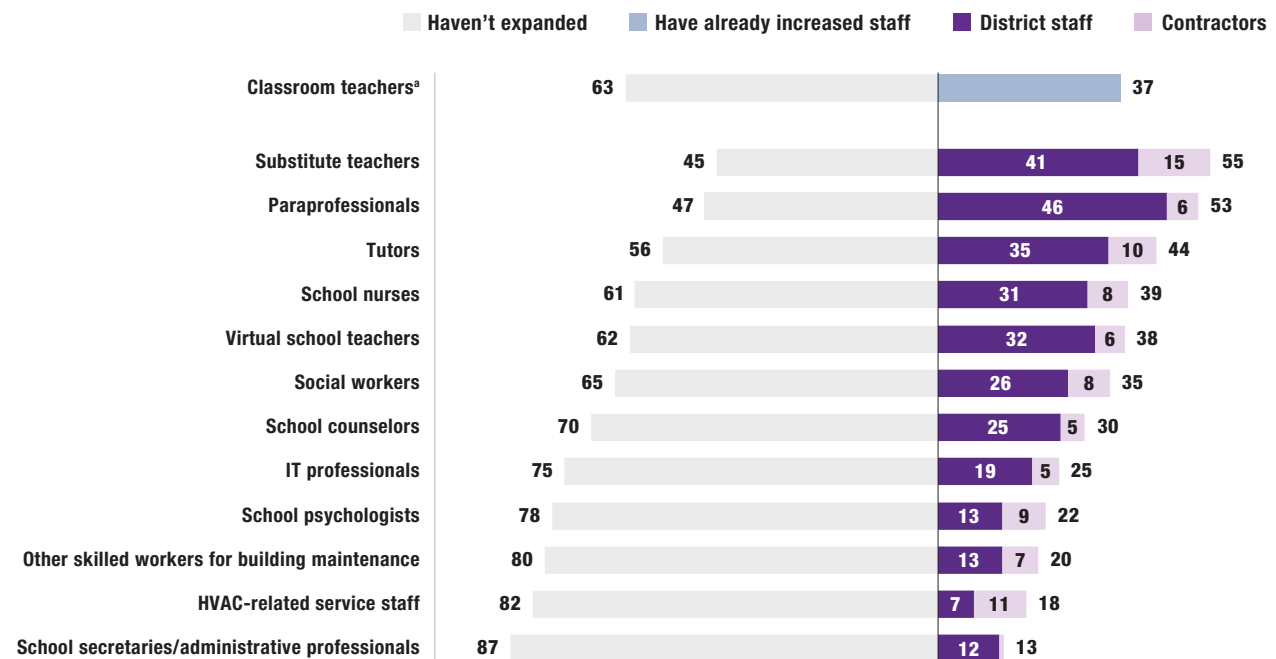
To determine whether districts have expanded the number of classroom teachers that they employed in 2021–2022 above prepandemic levels, we used data from our prior ASDP survey, which was administered in June 2021. In this survey, we asked district leaders, “In which categories, if any, is your district/CMO increasing (or trying to increase) the number of staff for 2021–2022 compared to their pre-pandemic level in 2019–2020?” The following three response categories were available for this question: “We’re not increasing staff in this category,” “We want to increase staff, but haven’t yet done so,” and “We’ve increased staff in this category.” We show in Figure 4

only the 37 percent of district leaders who responded, “We’ve increased staff in this category.” We do not include the 13 percent who answered, “We want to increase staff, but haven’t yet done so.” Leaders of high-poverty districts were particularly likely to report having increased the number of classroom teachers for 2021–2022 (results not shown in the figure).

Despite this general pattern of hiring, survey results suggest that this hiring has been insufficient to meet demand. For example, among the 55 percent of districts that had expanded hires of substitute teachers for 2021–2022, nine in ten agreed or strongly agreed with the following statement: “The pandemic

FIGURE 4

Percentage of District Leaders Who Reported That Their District Has Expanded the Number of Staff That They Hired, Either Directly or as Contractors, as of Fall 2021, by Job Category



NOTES: This figure depicts response data from the following survey question: “For each of the following staff categories, please indicate whether your [district/CMO] has expanded hires by either contracting or directly employing them for this school year (2021–2022)” (n = 341). This figure excludes district leaders who indicated that the staffing category is “not applicable” to their district. Bars might not sum to 100 percent because of rounding. HVAC = heating, ventilation, and air conditioning. IT = information technology.

^aData on the hiring of classroom teachers come from our June 2021 survey of district leaders. In June 2021, we asked respondents, “In which categories, if any, is your [district/CMO] increasing (or trying to increase) the number of staff for 2021–2022 compared to their pre-pandemic level in 2019–2020?” Respondents could indicate that they had already increased staff or that they wanted to increase staff but had not yet done so. Data include district leaders who indicated that they had already increased staff. Because we did not ask whether districts were expanding hires of classroom teachers through direct hires or contractors, we shade this job category in blue, although we expect few to no districts to primarily hire classroom teachers as contractors. For more information, see Diliberti and Schwartz, 2021.

has caused a shortage of substitute teachers in my district.” Nearly all indicated that they had a “slight,” “moderate,” or “considerable” shortage of substitute teachers as of fall 2021. Likewise, among the districts that have expanded hires of paraprofessionals for 2021–2022, nine out of ten indicated some level of shortage of paraprofessionals.

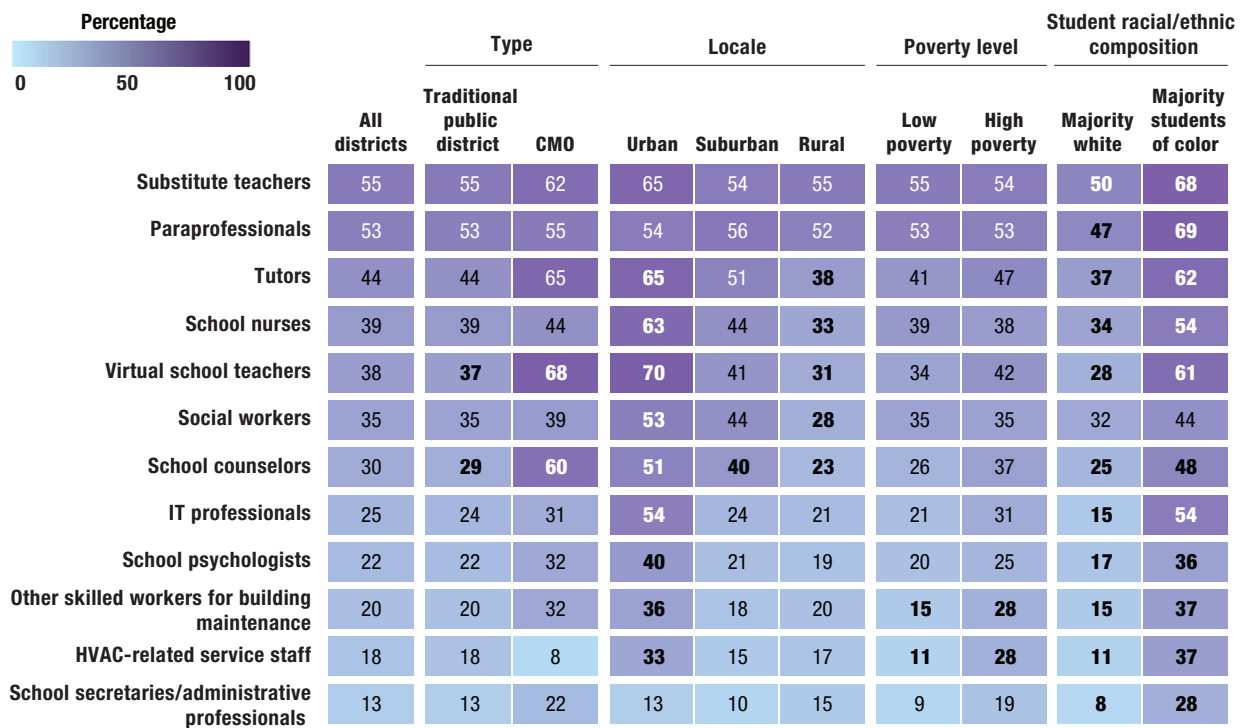
District leaders reported a consistent pattern across job categories of employing these staff directly versus relying on contractors. Only for heating, ventilation, and air conditioning (HVAC) service staff did contractors represent more than half of expanded hires. Our supposition is that districts will

be able to reduce hired contract workers more easily than district employees when the infusion of federal stimulus funds expires.

Figure 5 further shows which types of districts have expanded hires in the 12 nonteaching categories that we listed. Districts serving mostly students of color and urban districts have far outpaced their counterparts in expanding hires of nonteaching staff. As shown in Box 1, a large majority of urban districts mostly serve students of color, so the patterns observed in Figure 5 could be driven by the subset of districts that belong to both subgroups.

FIGURE 5

Percentage of District Leaders Who Reported That Their District Has Expanded the Number of Hires as of Fall 2021, by Job Category and Subgroup

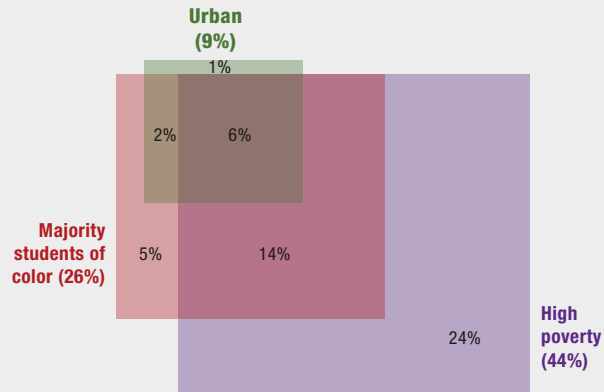


NOTES: This figure depicts response data from the following survey question: “For each of the following staff categories, please indicate whether your [district/CMO] has expanded hires by either contracting or directly employing them for this school year (2021–2022).” This figure presents the percentage of district leaders who said that they were expanding staff, regardless of whether they were hiring directly or contracting out ($n = 341$). It excludes district leaders who indicated that the staffing category is “not applicable” to their district. Values shown in bold indicate that the subgroup percentage of district leaders reporting that they expanded staff with that job title is statistically significantly different ($p < 0.05$) from the balance of district leaders not in that subgroup who said the same. HVAC = heating, ventilation, and air conditioning. IT = information technology.

BOX 1

The Degree of Overlap Between Urban Districts, High-Poverty Districts, and Majority-Students of Color Districts

Each district in our sample belongs to four of the nine district subgroups that we examine in this report. Urban districts, high-poverty districts, and districts serving mostly students of color, in particular, have a high degree of overlap. For example, almost all urban districts serve mostly students of color, and most are also high-poverty. We therefore expect to see similar patterns for these types of districts because the same district leaders are often represented in two—if not all three—of these district categories.



NOTE: Subgroup percentages may not sum to totals because of rounding.

Thirteen Percent of Superintendents Left Their Positions in the Past Year, Which We Believe Is a Normal Rate of Turnover for Superintendents

Education policymakers and researchers lack national estimates of superintendent turnover, which stymies systematic efforts to understand the extent to which superintendent turnover influences district performance and what factors contribute to turnover. To generate what we hope will be annually refreshed estimates from our relatively new ASDP, we examined our nationally representative roster of 3,549 superintendents that we use for recruitment into the ASDP.⁴ We refresh this roster at least annually.

As shown in Figure 6, in 13 percent of cases, the name of the superintendent on our district roster changed from the past school year (2020–2021) to this one (2021–2022). Turnover rates were relatively consistent across district subgroups, with one exception: Superintendents of districts serving mostly students of color were statistically significantly more likely to turn over than their counterparts in districts serving mostly white students.

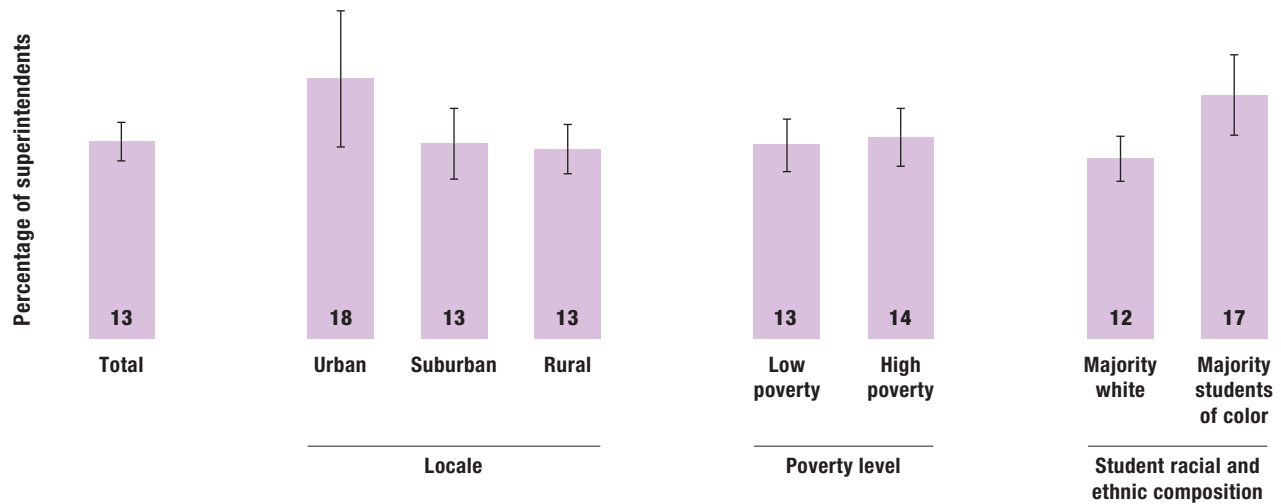
This 13-percent turnover estimate is roughly on par with a 2006 estimate from a survey of superintendents, which suggested that turnover rates were between 14 and 16 percent (School Superintendents Association, undated). We are not aware of any other more-recent nationally representative estimates of superintendent turnover. Therefore, we tentatively assume that the 13-percent turnover rate that we observed among the superintendents in our sample during the pandemic is a typical rate of turnover for superintendents. This might change, however, as we discuss next.

Half of Superintendents Were Either Undecided or Likely to Leave Their Positions in the Next Few Years

In the November 2021 survey, we asked district leaders how long they planned to remain in their current positions. When we look at only the respondents who said that they were superintendents (as opposed to assistant superintendents, research directors, or other district leadership), half were either undecided or selected responses that we interpreted as an intention

FIGURE 6

Percentage of Superintendents Who Left Their Current Position Between the Past School Year (2020–2021) and This School Year (2021–2022)



NOTES: We obtained these estimates by comparing our roster of superintendents that we use for recruitment into the ASDP in February 2021 with updates that we made in fall 2021. If the district superintendent’s name changed between these two periods, we counted this as superintendent turnover. The vertical black bars represent the 95-percent confidence interval for each estimate ($n = 3,549$).

to leave the position in approximately the next one to three years, which we label “likely leaving soon” in Figure 7. The other half selected responses that we categorized as “likely staying,” which includes those who replied that they plan to stay “as long as I am able,” “until a specific life event occurs” (such as children graduating from college), or “until I am eligible for retirement benefits.”

Our “likely staying” and “likely leaving soon” categories are imperfect. For example, a superintendent who we categorized as “staying” because they plan to stay “until [they are] eligible for retirement” might be near retirement and thus might be leaving the position soon. Likewise, a superintendent who we categorized as “likely leaving soon” because they responded “until my contract ends” might be in their first year of a five-year contract and thus might be planning to stay in the position for longer than our category label implies.

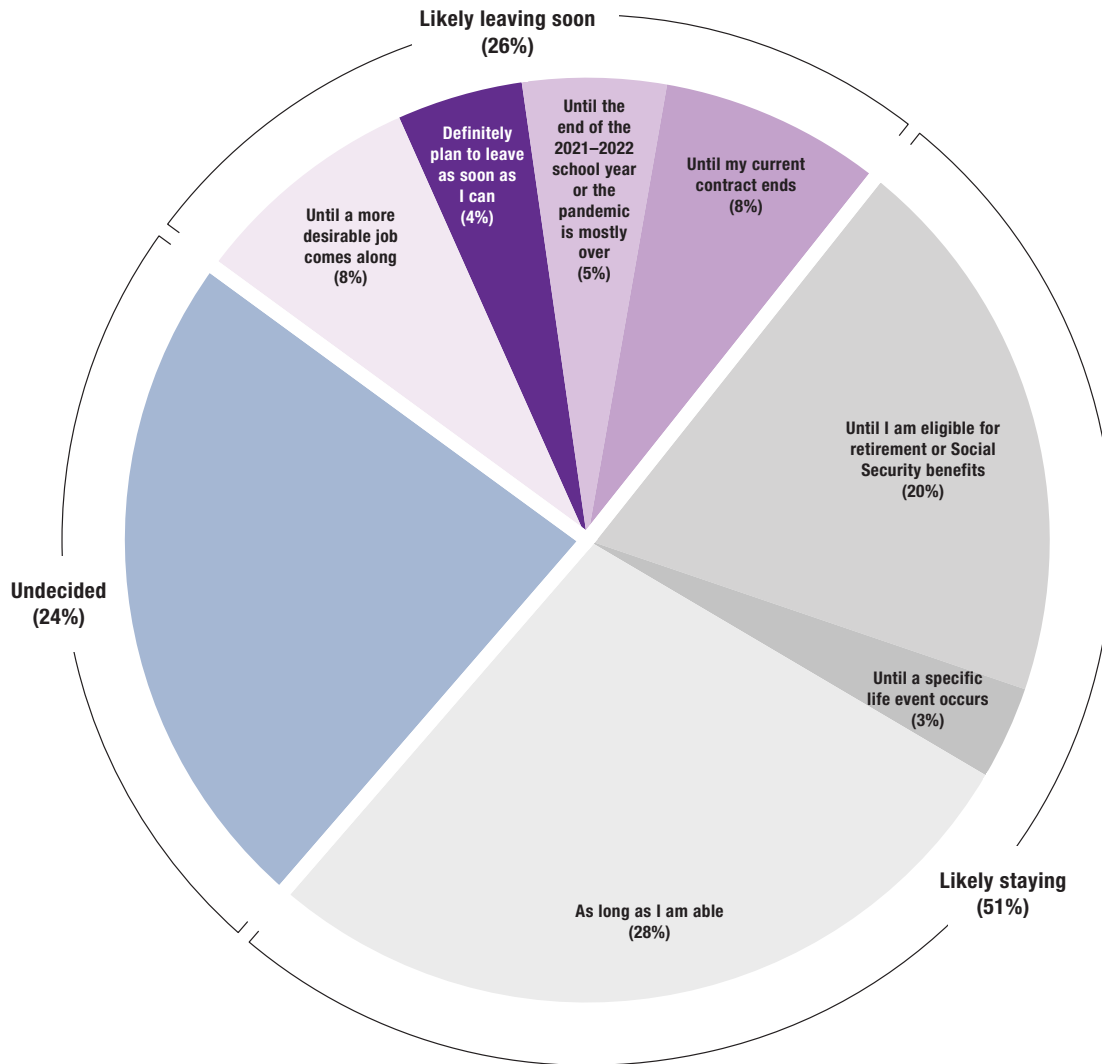
We did not observe any significant differences among district subgroups in superintendents’ intentions to leave their positions. That is, across all

district subgroups, we categorized about one-quarter of superintendents as “likely leaving soon,” about half as “likely staying,” and the remaining one-quarter as “undecided.”

Although we did not ask superintendents why they might plan to leave or why they are undecided, we investigated a few possible reasons from other data that we gathered through the survey, including agreement that political polarization about COVID-19 or about critical race theory are interfering with schooling in their district, concerns about declined enrollment or state accountability requirements for 2021–2022, or concerns about the mental health of staff and students. These hardly make up a complete list of potential reasons for leaving a superintendent position, but because they are timely topics about which we inquired on the November 2021 survey, we report them here. Interestingly, and perhaps surprisingly, we found no relationship between these potential stressors and the likelihood of a superintendent reporting plans to remain in their position. We hypothesize that our measure of staying or leaving

FIGURE 7

Superintendents' Reports of Their Future Career Plans as of Fall 2021



NOTES: This figure depicts response data from the following survey question: “Which statement best describes how long you plan to remain in your current position?” This figure includes data from only respondents who indicated that their job title is “superintendent” (n = 297). Percentages do not sum to 100 percent because of rounding.

is likely too imprecise to capture what we think are likely predictors for at least some of these reasons and decisions to leave.

On the November 2021 survey, we also asked superintendents the following two questions about their working hours:

1. “This fall 2021, how many hours do you spend on ALL job-related activities during a typical FULL WEEK in your [district/CMO]? Include

the hours you spend during the school day, before and after school, and on the weekend during a typical full week.”

2. “In fall 2019 prior to the pandemic, how many hours did you spend on ALL job-related activities during a typical FULL WEEK in your [district/CMO]? Include the hours you spent during the school day, before and after school, and on the weekend during a typical full week.”

Although the question about fall 2019 work hours is especially subject to bias in recall, we deemed it worthy to ask to obtain at least a rough sense of “normal” work hours and whether superintendents’ workload has increased during the pandemic, as measured by hours.

We found that superintendents—who were working an average 59-hour week prior to the pandemic—reported working 15-percent more hours per week after the pandemic began, with an average of 67 hours per week (see Figure 8). Seventy percent of district leaders said that their work hours had increased since the pandemic began, and there was a statistically significant increase in reported work hours for leaders in every district type except for CMO leaders. Superintendents’ reported typical work

hours per week before the pandemic were notably similar across all types of districts that we examined.

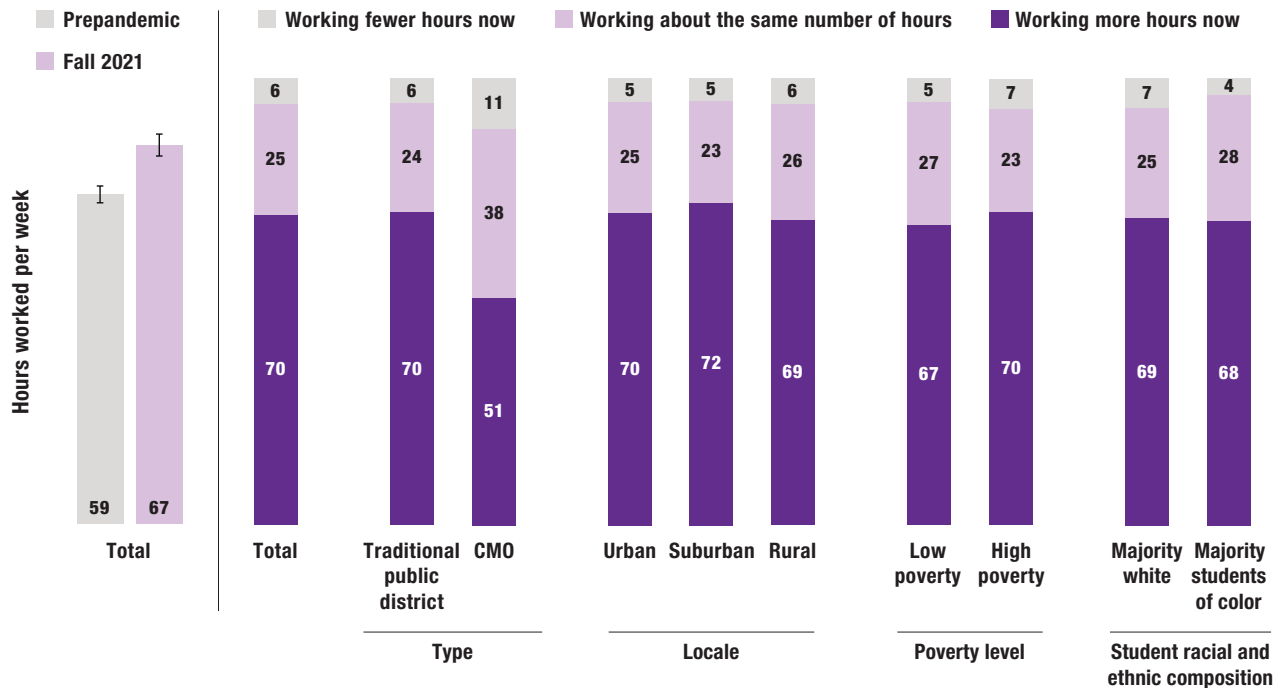
As a point of comparison, superintendents’ reported hours were substantially higher than the hours reported by private-sector chief executives in a 2019 federal survey.⁵

Implications

Our nationally representative survey results confirm that media attention to the severe staffing crunch in schools this school year is well placed, and maybe all the more so if current and future variants of COVID-19 infect even more school staff and students. Beyond the serious staffing concerns for this school year are

FIGURE 8

Superintendents’ Reports of Hours Worked per Week Before the Pandemic and in Fall 2021



NOTES: This figure depicts response data from the following survey questions: “This fall 2021, how many hours do you spend on ALL job-related activities during a typical FULL WEEK in your District/CMO?” and “In fall 2019 prior to the pandemic, how many hours did you spend on ALL job-related activities during a typical FULL WEEK in your District/CMO?” (n = 297). Respondents were categorized as “working more hours now” if they reported working two or more hours per week than their prepandemic levels and “working fewer hours now” if they reported working at least two hours fewer per week. All other respondents were categorized as “working about the same number of hours.” This figure includes data from only respondents who indicated that their job title is “superintendent.”

concerns in future years about a fiscal cliff and a potential increase in superintendent turnover.

The results described here and in our companion report (Diliberti and Schwartz, 2022) make us concerned about the potential for steep budgetary cuts for at least some districts in the coming years if state and local revenues do not make up the difference when COVID-19 federal aid expires. Factors that would increase a district's likelihood of hitting a fiscal cliff include the combination of declining enrollments, expansions of school staff above prepandemic levels, and (to a lesser degree) the employment of the increased number of staff as district employees rather than as contractors. Our data suggest that these patterns are most prevalent right now in urban districts and districts that serve a majority of students of color.

Of course, districts can take action to prevent sharp budgetary shortfalls. Results from our June 2021 survey indicate that district leaders are already thinking about how to mitigate the possibility of a fiscal cliff. Most commonly, leaders reported adjusting their expenditure plans to make up-front investments to save on future costs and to boost rainy day funds (Diliberti and Schwartz, 2021). Researchers, districts, and state education agencies need to watch how much staffing grows, enrollments change, and what mitigating actions districts take in the next year or two to prevent painful budget and staff cuts when the federal aid expires, especially in urban districts and districts serving mostly students of color.

Meanwhile, it will be important to monitor superintendent turnover in the coming years for any increases above what we believe has been a relatively normal rate thus far throughout the pandemic. Our data signal that superintendent turnover could increase in the near future, given that roughly half of surveyed superintendents are likely to leave in the short term or are otherwise undecided about whether to remain in their positions. Superintendent turnover can potentially harm district functioning in that it can disrupt longer-term and systemic school reforms, which typically take five or more years (Fullan,

2000) and can create inconsistent policymaking and a revolving door among central office staff (Alsbury, 2008). To understand what drives superintendent turnover, we need to build on research (such as that performed by Grissom and Andersen, 2012) that examines the conditions and reasons why superintendents leave in not only the largest urban districts but also in small to medium rural and suburban ones. This research would provide the basis for policy responses aimed at reducing superintendent turnover and improving the work conditions of the position.

Finally, although increased pay and benefits is the typical and clearest solution for reducing shortages of workers, public schools operate within budgets set by federal, state, and local government contributions, and they face trade-offs when increasing pay. A potential silver lining of these shortages in the longer term would be if they help convince policymakers to increase school funding to support increased wages or benefits to recruit or retain staff or if they spur innovation in school staffing.

Given the substantial variation in the types and amount of staff shortages that districts face, no single solution is likely to work for all districts; solutions need to be specific to school contexts. But one category of solutions that could have wide-ranging applicability relates to easing some restrictions for certain staff qualifications. For example, increasing states' teacher licensure reciprocity to allow teachers to carry their certifications across more state lines could help ease some teacher shortages (Goldhaber, 2021). Several states, such as Pennsylvania, Oregon, Kansas, and Michigan, have enacted or are considering laws that ease requirements, including by lowering educational requirements or otherwise expanding the eligible pool of substitutes to fill a shortage (Goldstein, 2021; Lowe, 2022; Porter, 2022; Reilly, 2021; Saenz-Armstrong, 2022).

Ultimately, the key longer-term solution to staff shortages likely will necessitate adequate pay and benefits for educators who are well qualified and trained. Furthermore, districts should build out a

variety of additional solutions that fit their local context. For example, districts and states can invest more in recruitment programs that diversify the teacher and substitute labor pool; expand the permanent core of substitute teachers to give more coverage when teachers are absent; develop new staffing arrangements with partners, such as out-of-school time providers, to infuse more-diverse and additional

staff into schools; and improve workplace conditions to reduce turnover by surveying staff about their preferences and building more flexibility into their jobs (Diliberti, Schwartz, and Grant, 2021).

The staffing challenges in this third pandemic school year are formidable, to be sure. But they must be solved if we are to help students recover from serious academic and social setbacks.

Notes

¹ Invitations were sent to district superintendents (or their previously specified designee) who could complete the survey themselves or designate another leader (or leaders) to complete the survey on behalf of their district. Most surveys (83 percent) were completed by the district's superintendent, while 4 percent were completed by an assistant or associate superintendent, 8 percent were completed by the district's research director, and the remaining 5 percent were completed by personnel with other job titles.

² Bureau of Labor statistics data show 174,000 job openings and 104,000 hires in educational services in October 2021. By comparison, there were 125,000 job openings and 92,000 hires in October 2020 and 131,000 job openings and 106,000 hires in October 2019 (Bureau of Labor Statistics, 2020; Bureau of Labor Statistics, 2021b).

³ To obtain these averages, we counted the number of job categories (out of a total of 25) in which districts reported a moderate or considerable shortage. We then averaged across districts.

⁴ Data on superintendent turnover do not come directly from the fall 2021 survey. To obtain an estimate of superintendent turnover, we began with a roster of 3,549 districts—which included information on the district's superintendent—that we used as the basis to recruit districts into the ASDP in February 2021. We updated superintendents' contact information in fall 2021 in preparation for administering the November 2021 survey. In cases where the superintendent changed between February 2021 and fall 2021, we counted this as turnover. We are not able to determine whether these superintendents moved to a similar role in another district or left the profession entirely. Our estimates of superintendent turnover exclude districts that are members of Council of the Great City Schools or CMOs, as well as districts that explicitly refused to participate in the ASDP.

⁵ Our estimate of hours worked by chief executives in the private sector comes from the 2019 one-year public-use microsample of the American Community Survey (U.S. Census Bureau, 2019). We report the number of hours worked per week for chief executives and legislators in the civilian labor force who worked as an employee of a private for-profit company or business.

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How This Analysis Was Conducted and Limitations

We fielded the fourth survey of the ASDP from October 25, 2021, to December 10, 2021. This report is based on survey responses from 359 district leaders. Responses reflect district leaders' *perceptions*, which might or might not align with districts' actual experiences. Also, respondents might not consistently interpret terms on the survey, such as “slight” or “considerable,” which might affect how they complete survey items.

We randomly sampled traditional public school districts and CMOs to invite them to enroll in the ASDP. All enrolled districts were invited to complete this survey. Of the 987 districts and CMOs that enrolled in the ASDP between fall 2020 and fall 2021, 359 participated in this survey.

Survey responses have been weighted to be representative of the national population of public school *districts*, not the national population of public school *students*. Students are not evenly distributed across school districts. Roughly 30 percent of the country's 50 million public school students are enrolled in urban districts (National Center for Education Statistics, undated-a), and the country's 120 largest school districts—many of which are urban—alone account for roughly 20 percent of all student enrollments (National Center for Education Statistics, undated-b). Among the population of 13,000 school districts in the United States, only 9 percent are urban, while 25 percent are suburban and 66 percent are rural (Grant et al., 2022). In our sample, urban districts have an average enrollment size of 33,400 students, while rural districts have an average enrollment of 1,700 students. Thus, although rural district leaders represent a majority of school *districts*, they do not represent a majority of public school *students*. Accompanying technical documentation (Grant et al., 2022) provides more information about survey methodology and weighting procedures.

Because districts' experiences vary, we examined differences in district leaders' responses by district characteristics. We obtained the data on district characteristics by linking survey data files to the 2019–2020 Common Core of Data issued by the National Center for Education Statistics. We analyzed the following four categories, which yield nine subgroups:

1. district type (traditional public school district versus CMO)^a
2. locale (urban, suburban, and rural)^b
3. student racial and ethnic composition (we categorize districts in which more than half of students are Black, Hispanic, Asian, Pacific Islander, American Indian/Alaska Native, or of two or more races as *majority students of color*, with the remaining districts categorized as *majority white*)
4. district poverty level (districts in which half or more of students qualify for a free or reduced-price meal are categorized as *high-poverty*, whereas the remainder are categorized as *low-poverty*).^c

It is important to keep in mind that each district in the survey belongs to four of the nine subgroups—e.g., a single school district that is a traditional public school district, suburban, low-poverty, and enrolls a majority of students of color. Thus, patterns observed across locales, poverty levels, and student racial and ethnic compositions might be driven by the same set of districts that share multiple characteristics.

We conducted significance testing to assess whether subgroups were statistically different at the $p < 0.05$ level. Specifically, we tested whether the percentage of district leaders in one subgroup reporting a response was statistically different from the remainder of district leaders who took the survey who were not in that subgroup and who said the same (e.g., leaders of urban districts versus other respondents who did not lead an urban district). Because of the exploratory nature of this study, we did not apply multiple hypothesis test corrections.

In this report, we describe only those differences among district subgroups that are statistically significant at the 5-percent level, unless otherwise noted. To see the full set of results by district subgroup, visit our Interactive Survey Results Tool at www.americanschooldistrictpanel.org/survey-results.

^a Note that all 26 CMOs in our sample are members of the Charter School Growth Fund (an organization that funds charter school expansion) and, therefore, are likely not representative of all CMOs nationally.

^b Our locale definition aligns with the four-category locale definition used by the National Center for Education Statistics, with the exception that we collapsed the districts located in towns into the rural category for sample size reasons.

^c We also examined differences in district leaders' responses by district size. We observed similar patterns by district size and locale (urban, suburban, and rural). Therefore, we present differences only by locale to avoid repetition.

About This Report

The American Educator Panels (AEP) are nationally representative samples of teachers, school leaders, and district leaders across the country. The American School District Panel (ASDP) is a partnership among the RAND Corporation, the Center on Reinventing Public Education, Chiefs for Change, the Council of the Great City Schools, and Kitamba. For more information, please visit the ASDP website at www.americanschooldistrictpanel.org.

To obtain a national picture of the staffing challenges that districts are facing in the 2021–2022 school year, we surveyed 359 district and charter network leaders in the ASDP from October to December 2021.

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 also thank Christine Mulhern and Betheny Gross for helpful feedback that greatly improved this report. We also thank Blair Smith for her editorial expertise and Monette Velasco for overseeing the publication process for this report.

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More information about RAND can be found at www.rand.org. Questions about this report or about the ASDP should be directed to hschwartz@rand.org, and questions about RAND Education and Labor should be directed to educationandlabor@rand.org.

About the Data Note Series

This Data Note series is intended to provide brief analyses of educator survey results of immediate interest to policymakers, practitioners, and researchers. If you would like to know more about the dataset, please visit *Technical Documentation for the Fourth American School District Panel Survey* (RR-A956-7, www.rand.org/t/RR-A956-7) 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 in reading other AEP-related publications, please email aep@rand.org or visit www.rand.org/aep.

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