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Where the Kids Went: Nonpublic Schooling and Demographic Change during the Pandemic Exodus from Public Schools

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Abstract

Over the first two full school years under the COVID-19 pandemic, K-12 enrollment in public schools fell dramatically (i.e., by more than 1.2 million students) with losses concentrated among the youngest students. Currently, little is known about where these students went and what learning environments they are experiencing. In this research note, I present leading descriptive evidence on this question by combining public-school enrollment data with newly collected state-level data on private-school and homeschool enrollment and Census-based estimates of the changed size of the school-age population resident in each state. These data indicate that, between the 2019-20 and the 2021-22 school years, homeschool and private-school enrollment grew by 30 and 4 percent, respectively. Across the states with available data, increased homeschool enrollment and population loss each explain 26 percent of the public-school enrollment decline while the more modest increase in private-school enrollment explains 14 percent. Over a third of public-school enrollment loss cannot be explained by observed changes in nonpublic-school enrollment and the school-age population. This large residual indicates the pandemic may have shaped learning opportunities, particularly for the youngest children, in additional ways (e.g., skipping kindergarten, unregistered homeschooling, truancy) that merit further scrutiny.

Keywords

enrollment, COVID-19, private school, homeschooling, demographics

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The pandemic has had historically unprecedented effects on the learning opportunities available to children. But understanding the diverse character of these effects—and, correspondingly, how to respond to them—has not been straightforward. The pandemic complicated the comparability of many conventional education indicators (e.g., because of changes in test-taking conditions and the population of students sitting for those tests). Furthermore, conventional data from administrative sources (e.g., school districts) and surveys on student experiences (e.g., social-emotional measures) are often available only after long delays. Within this context, the leading administrative data on school enrollment have played an important role in providing early, at-scale information on the learning disruptions students experienced and the challenges schools and teachers faced.

What the data on public-school enrollment indicate is striking. In the first full school year after the onset of the pandemic, K–12 public-school enrollment in the US fell by more than a million students. These public-school enrollment losses were particularly prominent among students in early elementary grades and kindergarten (Goldstein and Parlapiano, 2021). The decision many school districts made to offer remote-only instruction in fall 2020 contributed meaningfully to this exodus from public schools (Dee et al., in press). And these enrollment losses persisted through the 2021–22 school year. Although these declines in public-school enrollment occurred broadly throughout the US, they were particularly large in certain states (figure 1; appendix table A.1).

But we know little about where these students went during the pandemic and what learning environments they experienced. Official federal data on private-school enrollment and homeschooling are not yet available beyond 2019. Furthermore, the limited information that is available is enigmatic. In particular, more than a third of private-school enrollment is in Catholic schools, but national data indicate that Catholic school enrollment actually fell by nearly 3 percent between fall 2019 and 2021 (Barnum, 2022). A survey fielded by the US Census Bureau does indicate that the share of students being homeschooled doubled between the spring and fall of 2020 from 5.4 percent to 11.1 percent (Eggleston and Fields, 2021). But whether this initial increase in homeschooling persisted (including to the 2021–22 school year, when most public schools were open for in-person instruction) is far from clear.

This Research Note provides new evidence based on unique state-level data collected in collaboration with data journalists (Toness and Lurye, 2023). This collaborative collected and organized the most recently available versions of three distinct types of data along with the available data on public-school enrollment: (1) estimates of the school-age population in each state, (2) data on K–12 private-school enrollment from 33 states and DC, and (3) data on homeschooling for 21 states and DC. The population estimates and public-school enrollment data are based on federal sources (i.e., the US Census Bureau and the National Center for Education Statistics). The data on private-school and homeschool enrollment were collected and examined through a combination of canvassing publicly available websites, contacting state officials, and filing formal data requests.

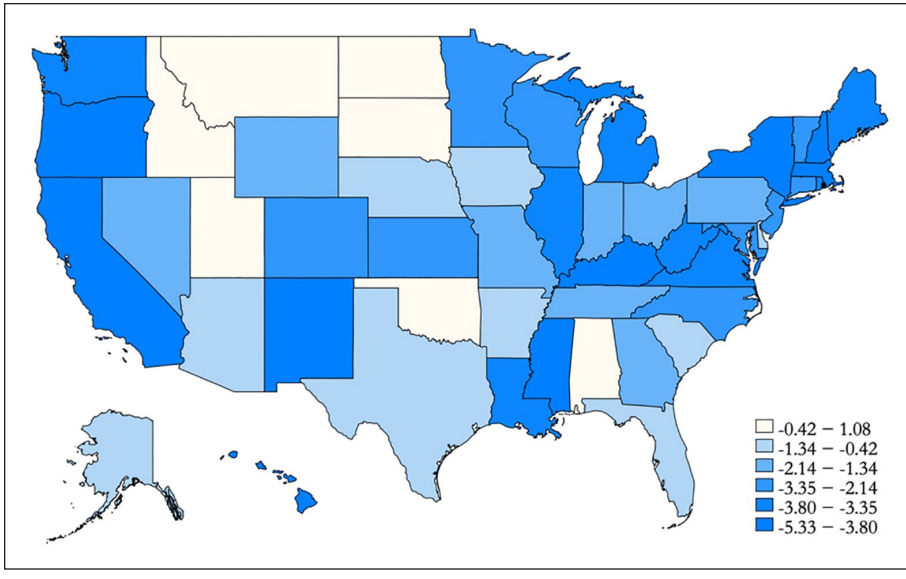

Figure 1. Percentage change in K–12 public-school enrollment, by state, 2019–20 to 2021–22.
Source: Author's calculations based on Common Core of Data and state sources.

Across the states with available data, increased homeschool enrollment and population loss each explain 26 percent of the public-school enrollment decline, while the more modest increase in private-school enrollment explains 15 percent. Roughly a third of public-school enrollment loss cannot be explained by observed changes in nonpublic-school enrollment and the school-age population. This indicates the pandemic may have shaped learning opportunities, particularly for the youngest children, in additional ways (e.g., skipping kindergarten, unregistered homeschooling, and truancy) that merit further scrutiny.

Private-School Enrollment

We identified annual K–12 private-school enrollment counts in 33 states (and DC) through the 2021–22 school year. These states (appendix table A.1) cover a large and reasonably representative part of the nation. Specifically, at the onset of the pandemic, nearly 80 percent of US school children resided in these states. And the public-school enrollment declines across these states during the pandemic (i.e., roughly 2.5 percent) are similar to those in the states where private-school enrollment data were unavailable.

Overall, these data indicate that, between fall 2019 and fall 2021, private-school enrollment increased by 4.3 percent. But these changes varied considerably by state

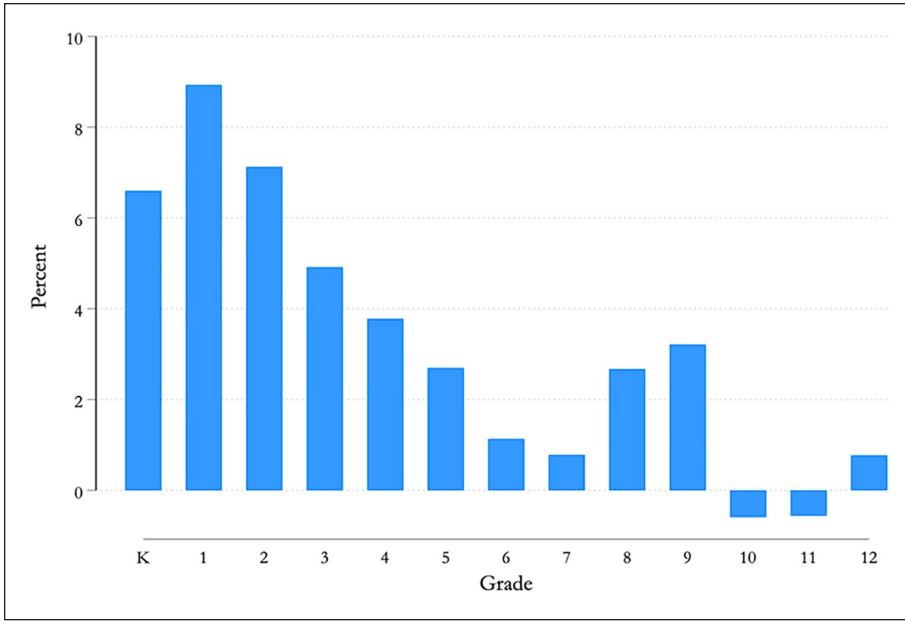

Figure 2. Percentage change in K–12 private school enrollment, by grade, 2019–20 to 2021–22.
Source: Author's calculations based on state sources.

(appendix table A.1); Massachusetts, Rhode Island, Tennessee, Texas, and Washington saw growth exceeding 14 percent, and several other states experienced declining private-school enrollment. In 27 of these states, it is possible to identify the pandemic-related change in private-school enrollment by grade. Figure 2 illustrates these grade-specific changes from fall 2019 to fall 2021. Unsurprisingly, the growth in private-school enrollment was particularly large in kindergarten and early elementary grades, a pattern consistent with the pattern of grade-specific declines in public-school enrollment. In particular, the large growth in 2021–22 private-school enrollment in first grade is consistent with the hypothesis that some of the many families who avoided public kindergarten in 2020–21 instead chose private schools and remained with that choice.

The comparative magnitudes of the enrollment changes across public and private sectors merits emphasis. In the 33 states (and DC) with available data, private-school enrollment increased by more than 142,000 students during the pandemic (appendix table A.1). But over the same locations and time period, public-school enrollment fell by nearly 7 times this amount (i.e., more than 959,000 students). These comparative changes indicate that the growth in private-school enrollment during the pandemic explains roughly 15 percent (i.e., 142,000 / 959,000) of the corresponding decline in public-school enrollment.

Homeschool Enrollment

The effort to collect state-level data on annual homeschool enrollment focused only on states that required homeschooling to be reported and where complete homeschool enrollment data could be acquired, resulting in information from 21 states and DC (appendix table A.2). Notably, these places include just over half the school-age population at the onset of the pandemic. These states also appear representative in that, over the first two full school years under the pandemic, they experienced public-school enrollment declines (i.e., 2.9 percent) similar to the nationwide decline (appendix table A.2).

Overall, these data indicate that between the 2019–20 and the 2021–22 school years, homeschool enrollment increased by 30 percent. Notably, this dramatic increase reflects enrollment during the second full school year under the pandemic, when most schools returned to in-person instruction. These data indicate that the early homeschooling increase documented by a US Census Bureau survey (Eggleston and Fields, 2021) persisted into the 2021–22 school year. The magnitudes of the percentage increases in homeschooling enrollment varied considerably across states; every state with available data saw increased homeschool enrollment during the pandemic. The smallest occurred in North Carolina, where homeschool enrollment grew by 8 percent. A diverse set of states saw particularly large increases, including Florida (43 percent), New York (65 percent), and Pennsylvania (53 percent).

The sustained increase in homeschool enrollment during the pandemic is also large in absolute terms and not simply as a large percentage increase relative to its low pre-pandemic base. To put this in perspective, in the 22 locations with homeschool data, K–12 public-school enrollment fell by 704,593 students while private-school enrollment increased by 102,847 students (appendix table A.2). The corresponding increase in homeschool enrollment was 184,047 students. In other words, increased private-school enrollment accounts for 15 percent of the decline in public-school enrollment, but increased homeschooling accounts for 26 percent. Stated differently, for every one-student increase in private schooling during the pandemic, homeschooling increased by nearly two students.

The School-Age Population

Another potentially important source of variation in student enrollment involves changes in the population of school-age children. Between 2020 and 2021, the US experienced historically low growth in the overall population (0.1 percent), a pattern attributed to reductions in net international migration and births and increased mortality from the COVID-19 pandemic (US Census Bureau, 2021). During this slowdown, a large amount of domestic migration also contributed to substantial differences in the location of the US population; states such as Florida and Texas gained large numbers of residents, and California, New York, and Illinois lost residents.

To understand the potential implications of these demographic changes for school-enrollment patterns, I constructed age and state-specific population estimates from the

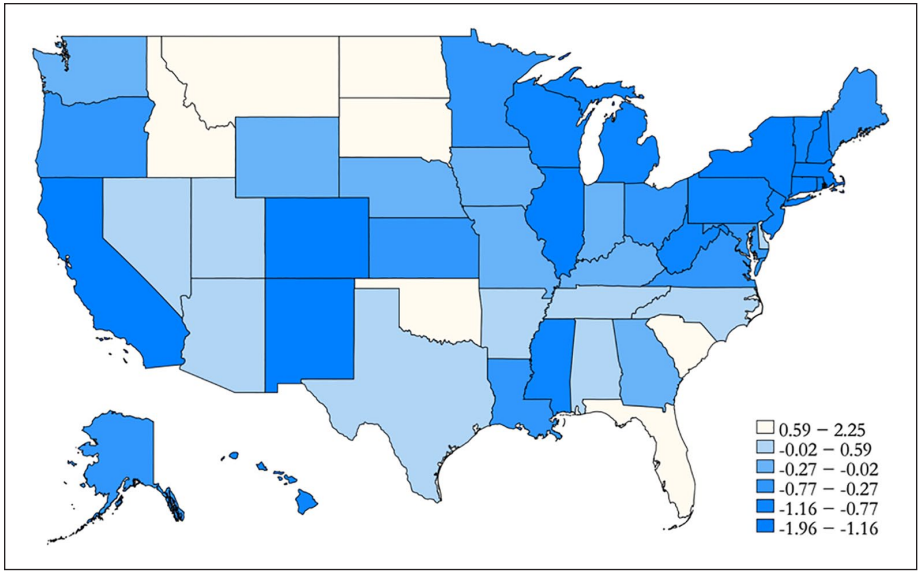

Figure 3. Percentage change in the school-age population, by state, April 2020 to July 2021.
Source: Author's calculations based on data from the US Census Bureau.

US Census Bureau (i.e., the "Vintage 2021") estimates to identify the school-age population in each state at the beginning of the pandemic (measured on April 1, 2020) and on July 1, 2021 (just before the 2021–22 school year). Specifically, following the reporting practice of the National Center for Education Statistics, I defined the school-age population as the resident population ages 5 to 17. Notably, these population estimates align with the 2019-20 and 2021-22 school years, but not exactly, as state enrollment data are typically defined as of early October.

The national population estimates indicate that, during the pandemic, the school-age population in the US fell by more than 250,000 (appendix table A.3) or nearly 16,900 per month on average. Some of this national demographic change is among students who never attended public schools. Nonetheless, the magnitude of this population loss—roughly 21 percent of the corresponding decline in public-school enrollment nationally—suggests that overall demographic change contributed meaningfully to public-school enrollment losses.[1]

The location of the school-age population also shifted, with the pattern of states gaining and losing children matching the dramatic changes in the locations of the total population (figure 3). The demographic changes in the size of the school-age population in each state also appear to contribute meaningfully to the corresponding changes in public-school enrollment.[2] For example, between the 2019–20 and the 2021–22 school years, K–12 public-school enrollment in New York fell by 5 percent (appendix table A.1). But over roughly the same period, the school-age population in the state fell

by nearly 2 percent, which suggests that in New York, as much as 40 percent of the decline in public-school enrollment is attributable to underlying demographic change. These patterns suggest that broad factors shaping location decisions during the pandemic (e.g., the persistence of work-from-home arrangements and rising housing costs) contributed to the changes in public-school enrollment. An ancillary analysis shows that the percent declines in the school-age population—both nationally and in states with the largest losses—are larger among younger children (i.e., those aged 5 to 11). Because such demographic changes are likely to be durable, districts that lost enrollment due to such factors are unlikely to see their enrollment rebound substantially.

Putting It All Together

Data from the 21 states (and DC) for which data on all pandemic-related K–12 enrollment changes—public, private, and homeschool—are available, reveal two primary explanations to the question of where the students of the pandemic exodus from public schools went (table 1). One explanation is reflected in the sharp growth in homeschooling (and, to a lesser extent, private schooling) that was sustained into the 2021–22 school year. Specifically, the growth in homeschool enrollment is equivalent to 26 percent of the corresponding decline in public-school enrollment, while the contribution of increased private-school enrollment is smaller (i.e., 15 percent). The second explanation is the decline in the resident school-age population, which is also equivalent to 26 percent of the public-school enrollment decline over this two-year period (table 1). As noted above, this calculation may understate the role of population change because the population estimates are necessarily based on the 15-month period with available Census data.[3]

The important role of demographic change suggests that some of the enrollment loss public schools experienced is likely to endure. The sharp and sustained growth in homeschooling documented here also raises policy-relevant questions. In particular, the quality of the homeschool education children have received since the onset of the pandemic is an open question and an important one, given that this large-scale shift to homeschooling occurred unexpectedly and under some duress. These enrollment data cannot speak directly to the detailed character of the sharp increase in homeschooling. However, these measures do suggest indirectly that the newly homeschooled during the pandemic were distinctive. Specifically, the state-level percent growth in homeschooling during the pandemic is positively correlated with both the percent of adults who have a bachelor's degree and the percent who voted for President Biden in 2020 (correlation coefficients = 0.8). These correlations are also consistent with the evidence that providing remote-only instruction during the pandemic encouraged parents to seek schooling alternatives (Dee et al., in press).

A third important implication of these new data concerns the amount of public-school enrollment loss that cannot be attributed to observed changes in nonpublic enrollment and demographic change. More than a third of the loss in public-school

Table 1. Enrollment changes, population changes, and residuals by State, 2019-20 to 2021-22.

	K-12 Enrollment Change by Sector			Change in School-Age Population	Residual
	Public	Private	Homeschool		
State	(1)	(2)	(3)	(4)	(1)+(2)+(3)-(4)
CA	–270,928	9,502	14,096	–95,751	–151,579
CO	–23,175	507	2,622	–10,943	–9,103
DC	470	1,113	770	1,341	1,012
DE	–1,529	556	1,757	688	96
FL	–18,754	22,141	45,994	23,901	25,480
GA	–25,575	1,608	13,149	–1,758	–9,060
LA	–25,047	–3,253	3,572	–5,562	–19,166
MA	–35,293	10,840	5,288	–17,940	–1,225
MN	–19,380	4,314	7,100	–2,938	–5,028
MT	615	789	1,553	2,943	14
NC	–34,086	11,352	11,355	693	–12,072
ND	971	110	804	1,176	709
NE	–2,018	–697	4,313	–537	2,135
NH	–6,684	1,500	1,230	–2,273	–1,681
NY	–132,398	–8,269	21,401	–60,182	–59,084
PA	–32,694	11,974	13,868	–15,642	8,790
RI	–4,817	3,560	1,250	–2,222	2,215
SC	–3,180	608	9,863	5,450	1,841
SD	1,306	–937	2,845	1,652	1,562
TN	–14,043	18,862	2,247	4,388	2,678
WA	–37,443	14,450	11,212	–1,167	–10,614
WI	–20,911	2,217	7,758	–8,803	–2,133
Total	–704,593	102,847	184,047	–183,486	–234,213

Sources: Federal and state sources identify enrollment by sector in fall 2019 and fall 2021. The change in the school-age population is based on "Vintage 2021" estimates from the U.S. Census Bureau.

enrollment cannot be explained by corresponding gains in private-school and home-school enrollment and by demographic change (table 1). California provides a striking and illustrative example. Between the 2019–20 and the 2021–22 school years, K–12 enrollment in California's public schools fell by roughly 271,000. Some of this loss can be attributed to the corresponding decline in the state's school-age population (i.e., nearly 96,000). Similarly, the state also saw contemporaneous growth in private and homeschool enrollment (i.e., roughly 25,000). But these sources fail to explain more than half the state's public-school enrollment losses (i.e., more than 150,000 students).

Some of the unexplained loss in K–12 enrollment may simply be attributable to measurement error (particularly in the estimates of the resident school-age

population), but the magnitude of the unexplained enrollment drop indicates that other potential causes merit further scrutiny.[4] Also, extrapolating the measured population decline to better match the timing of the enrollment data only reduces the share of the public-school enrollment decline that is unexplained to 23 percent.

There are at least three potential explanations for these large and unexplained enrollment losses, none of which are mutually exclusive and all of which are relevant for supporting academic recovery from the pandemic: (1) an increase in truancy, (2) growth in the prevalence of unregistered homeschooling (i.e., homeschool enrollment not reported to the state), and (3) an increase in the number of young learners skipping kindergarten.

Data are not widely available on the first two possible factors. To explore the empirical salience of kindergarten skipping, I identified states where kindergarten enrollment is and is not required, using data from the Education Commission of the States (2020). Of the 21 states (and DC) in table 1, 13 require kindergarten and 9 do not. Among the 9 locations where kindergarten is required, the public-school enrollment loss unexplained by changes in nonpublic enrollment and demographics is only 3 percent. In contrast, in the 13 states where kindergarten is not required, the unexplained public-school enrollment loss is nearly 40 percent. These comparative data indirectly suggest that, in states where it is allowed, skipping kindergarten increased meaningfully during the pandemic.

Overall, these data provide new insights that can guide ongoing efforts to understand the educational impact of the pandemic and to address those effects. I note four examples here. First, evidence on the role of demographic change suggests that many school districts facing fiscal and operational challenges in the face of enrollment loss are likely to find those enrollment losses enduring. Second, the sharp and sustained growth in homeschooling and private-school enrollment raises new questions about the quality of the learning environments children are experiencing. Third, the combined evidence of demographic change and increased nonpublic-school enrollment suggests that the pandemic may have influenced the racial, ethnic, and socioeconomic segregation of students across public schools and across the public and private sectors. Finally, the surprisingly large amount of public-school enrollment loss unexplained by changes in nonpublic enrollment and demographics suggests the existence of other developmentally relevant factors (e.g., increases in kindergarten skipping, unregistered homeschooling, and truancy) that merit further scrutiny as richer data become available.

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. As noted above, the available data imply that this comparison is based on a 24-month enrollment change and a 15-month population change. However, a simple extrapolation of the national decline in the estimated school-age population to cover the 24-month period further underscores the contributions of demographic change. Specifically, it implies that the school-age population fell by just over 400,000 over the 2-year period (i.e., approximately a third of the public-school enrollment decline).
2. A scatterplot of the percentage change in public-school enrollment during the pandemic as a function of the change in the resident school-age population shows a statistically significant one-to-one relationship. See Dee (2022).
3. However, a simple extrapolation of the Census data to better match the timing of the enrollment data leaves the results qualitatively unchanged. Specifically, the national population estimates show a decline of nearly 16,900 school-age individuals per month (e.g., due to lower birth rates). And the states in our 22-jurisdiction data encompassed roughly half the school-age children in the U.S. at baseline. Adding 9 additional months of possible population decline based on these facts to the results in Table 1 implies the loss of an additional 76,050 individuals (i.e., 16,900 X 0.5 X 9). This imputation would imply that population loss explains just over 36 percent, rather than 26 percent, of the public-school enrollment loss.
4. To explore the empirical relevance of measurement error further, I also replicated these residual calculations using several years of *prepandemic* California data on school enrollment by sector and the school-age population. This falsification exercise indicated that the public-school enrollment changes unexplained by nonpublic enrollment and demographic changes were small.

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