FEDERAL RESERVE BANK of CLEVELAND

Economic Commentary

11.23.2026 | ISSN 2163-3738 | Number EC 2026-28

Where Did the Ohio Public School Students Go?

The COVID-19 pandemic coincided with an exodus of Ohio students from traditional public schools, marked by sharply lower pre-k and kindergarten enrollments initially and widespread shifts to home education, online charter schools, and nonpublic schools across all grade levels. Student losses varied considerably across districts, with lower-performing districts experiencing greater student losses to online schools, in particular, than did higher-performing districts. Research shows online school students perform worse academically than their brick-and-mortar peers, likely reducing educational attainment, skill development, and future earnings. This discrepancy is particularly concerning for students in lower-performing districts, where the concentration of students shifting to lower-quality educational alternatives compounds existing economic disparities and weakens regional workforce competitiveness.

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Topics Education

DOI 10.26509/frbc-ec-202628

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Introduction

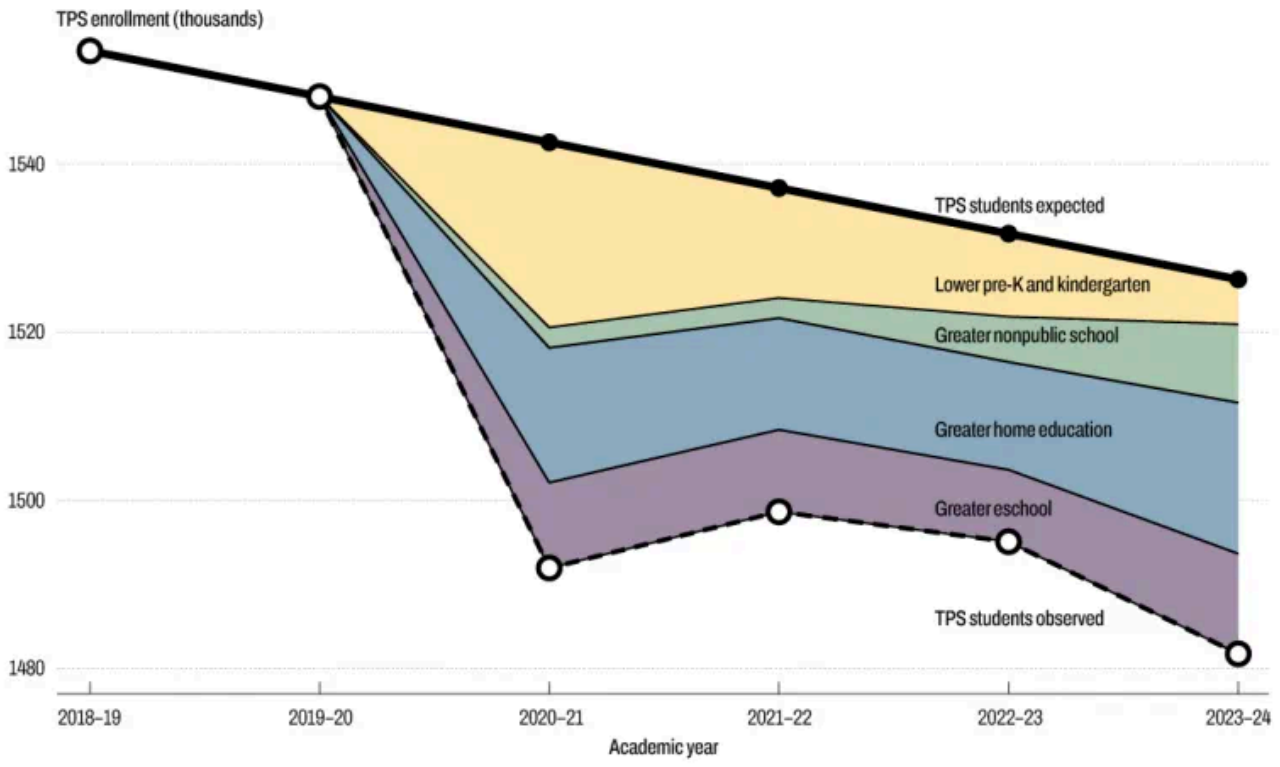
In this *Economic Commentary*, we examine Ohio's post-pandemic decline in traditional public school (TPS) enrollment, a decline which mirrors nationwide trends. [1] The drop reflects

reduced preschool and kindergarten enrollment and increased movement to alternatives, including nonpublic schools, home education, and online-based community or charter schools (eschools). In addition, we investigate whether these enrollment shifts vary by school district quality, measured by district-level performance on 2018–2019 state exams. District performance serves as a meaningful quality indicator for two reasons. First, families can observe and use it when making schooling decisions. Second, performance correlates strongly with graduation rates and college enrollment, both of which have significant implications for future earnings and labor force participation (Autor et al., 2008; Heckman and LaFontaine, 2010). [2]

Lower-quality school districts observed larger enrollment losses to eschools and nonpublic schools, while districts in the middle of the quality distribution lost students to home education. This pattern is particularly concerning given research showing that eschool students perform significantly worse academically than their brick-and-mortar counterparts (Ahn and McEachin, 2017; Fitzpatrick et al., 2020), suggesting that students from already disadvantaged districts may face compounding educational challenges. While labor force implications won't materialize for over a decade, these large, durable enrollment shifts warrant close attention because both the level and quality of schooling remain among the strongest predictors of future workforce outcomes.

Decline in TPS Enrollment Attributed to Several Sources

Figure 1: Trends in Enrollment for TPS and Education Alternatives in Ohio



Sources: Ohio Department of Education and Workforce advanced reports, authors' calculations

Using Ohio Department of Education and Workforce (DEW) data for 2019–2024, we estimate expected TPS enrollment absent the pandemic and compare it to observed enrollment. Figure 1 shows this comparison: the dashed line shows actual enrollment, the solid line shows expected enrollment based on prepandemic trends, and ribbons show where students went that explain the difference: pre-k/kindergarten delays or nonenrollment, nonpublic schools, home education, or eschool. TPS experienced a large, immediate, and durable decline in enrollment. [3]

Changes for pre-k and kindergarten in the 2020–2021 school year are likely to be explained by changes to the decision of the timing of initial enrollment, for example, enrolling in kindergarten at age six instead of age five or enrolling in preschool or not, as opposed to switching to a TPS alternative. Nearly half of all TPS students were switched to fully remote instruction in January 2021, an arrangement which parents of young children may have found less effective than in-person classes (Ohio Department of Education and Workforce, 2023).

Pre-k and kindergarten changes after 2021 can be partially explained by delayed enrollment, while another factor is students' leaving TPS. Pre-k enrollment, both in levels and as a share of total TPS enrollment, had fully rebounded by the 2023–2024 school year, a situation which

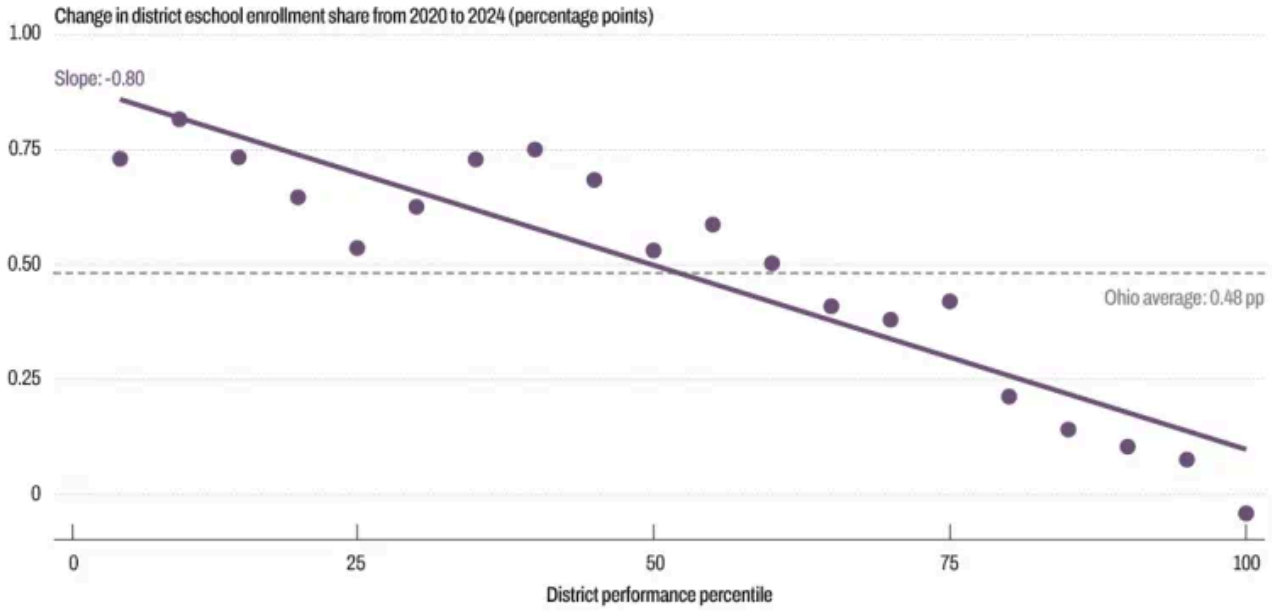
does not support delayed or depressed enrollment as the explanation; however, in this timeframe, kindergarten enrollment levels never recovered to 2020 levels. [4]

In the next sections, we turn to examining how school district quality correlates with TPS departures.

The Lowest Performing Districts in Ohio Lost a Larger Share of Students to Eschools

Having observed a decline in TPS enrollment and movement into a range of alternatives, we investigate how these changes correlate with school district quality. Figures 2 through 5 show the relationship between district quality and the change in the share of students within a public school district who are attending eschool, being educated at home (homeschooled), or receiving an income-based or geography-based scholarship to attend a nonpublic school. District quality is proxied by 2019 performance index (PI) scores, a composite of student exam performance within a school district (ODEW, 2026). We look at these changes from 2020 to 2024 using district school-choice options data from DEW. [5] , [6] Districts are ranked according to PI scores, moving from the lowest-performing districts on the left to the highest-performing districts on the right.

Figure 2: Relationship between District Quality and Share of Students in Eschools



Source: Ohio Department of Education and Workforce

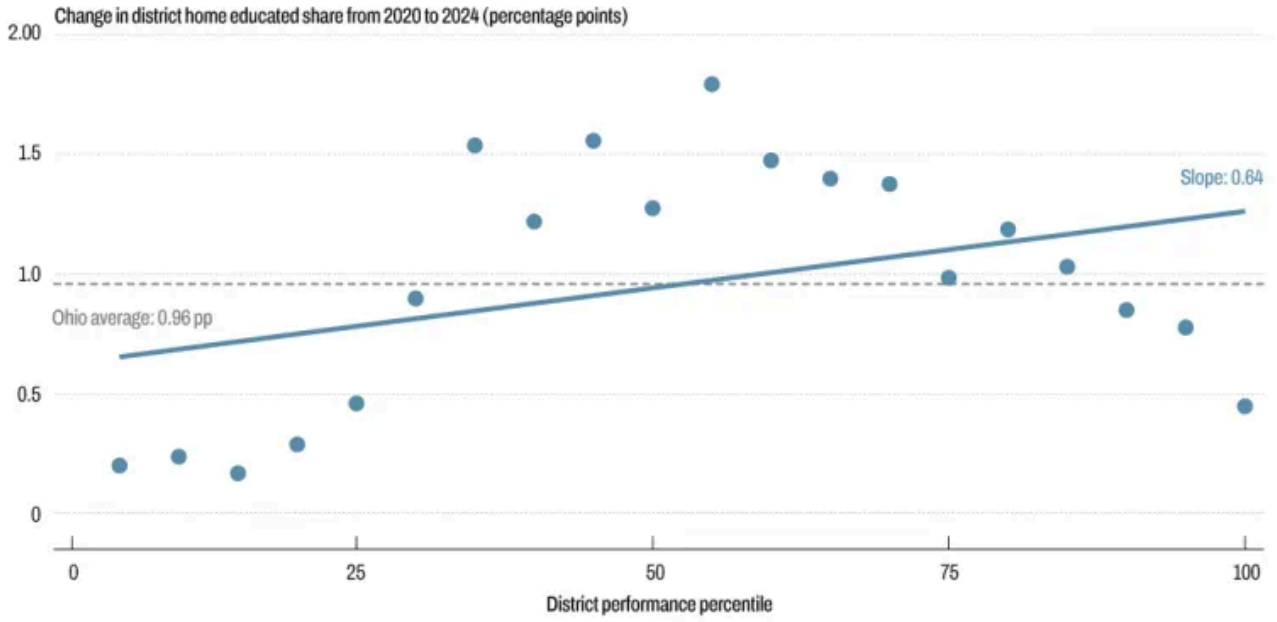
Notes: Figure displays a binscatter of the change in eschool enrollment share between the 2019–2020 and 2023–2024 school years plotted against each school district's performance index score from the 2018–2019 school year. Districts are grouped into 20 equal-sized bins based on this score, weighted by each district's 2019 enrollment. The solid purple line shows the linear fit between district performance and the change in eschool enrollment share, with the slope printed near the top left of the plot. The gray dashed line marks Ohio's statewide average change in eschool enrollment share.

The eschool enrollment share grew more in lower-performing districts than in higher-performing districts, as seen in Figure 2. Some students may benefit from transitioning to eschools, such as those experiencing bullying or adverse life events or students whose behavioral difficulties create challenging learning environments for themselves and other students. However, research by Fitzpatrick et al. (2020), Ahn and McEachin (2017), and Molnar et al. (2019) on the effects of eschools on student achievement show that online students perform worse across a range of subjects when compared to their brick-and-mortar peers and have lower graduation rates on average. These educational deficits carry labor market consequences: lower attainment reduces workforce skills, earnings potential, and economic mobility (Autor, 2014).

Evidence from the pandemic further underscores these concerns: virtual instruction had substantially larger negative effects on disadvantaged schools, reducing college preparedness and enrollment (Pope and Yaow, 2026). In addition, research by Abel and Gabe (2011) finds that human capital is a key driver of productivity differences across US metropolitan areas, with educational attainment strongly associated with regional economic performance. These concentrated outflows to lower-performing alternatives may reduce future human capital accumulation in already-challenged areas, potentially reinforcing existing patterns of regional variation in workforce competitiveness.

Districts in the Middle of the Performance Distribution Lost the Most Students to Home Education

Figure 3: Relationship between District Quality and Share of Students Being Homeschooled



Source: Ohio Department of Education and Workforce

Notes: Figure displays a binscatter of the change in home-educated enrollment share between the 2019–2020 and 2023–2024 school years, plotted against each school district's performance index score from the 2018–2019 school year. Districts are grouped into 20 equal-sized bins based on this score, weighted by each district's 2019 enrollment. The solid blue line shows the linear fit between district performance and the change in home-educated enrollment share, with the slope printed near the top right of the plot. The gray dashed line marks Ohio's statewide average change in home-educated enrollment share.

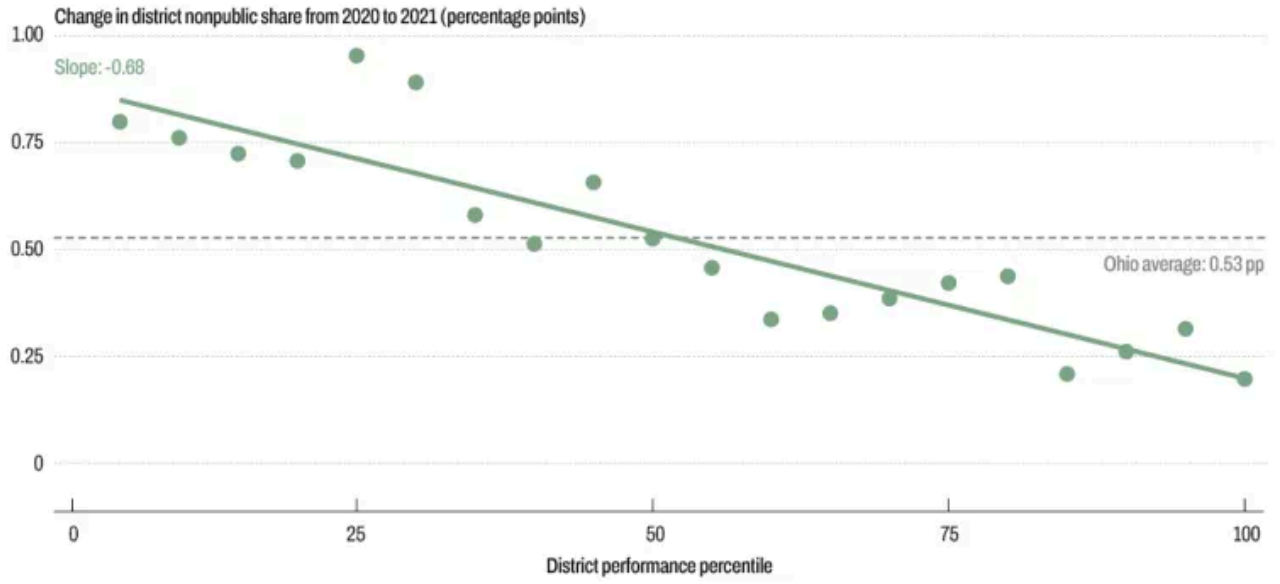
There is an overall positive correlation between district quality and the change in the share of students who are being educated at home, but plotting the data reveals that this relationship is actually nonlinear as displayed in Figure 3. School districts in the middle of the PI distribution have the largest change in the share of children educated at home from 2020 to 2024. School districts in the bottom fifth of the performance distribution were less likely than all other districts to lose enrollment to home education, a detail which suggests district quality may play a smaller role in the home education decision than it did for eschool enrollment. An alternative explanation may be that families in lower-performing districts were more likely to choose eschools rather than home education. Eschools offer resources such as laptops available to borrow, instructional materials, and internet subsidies, benefits that may be particularly valuable to the low-income families who disproportionately populate these districts.

School quality is not the only factor in homeschooling decisions. Parents also often cite religious instruction, moral values, and family emphasis, among other reasons (Sempeles and Cui, 2024). How might the increase in homeschooling affect later labor market outcomes? Causal connections remain unclear, though recent survey data suggest homeschooled adults have lower full-time employment rates than non-home-schooled adults (Cheng and Watson, 2025).

Lower-Performing Ohio Districts Lost More Students to Nonpublic Schools before Changes to the State Scholarship Program in 2023

Finally, we consider students who receive scholarships to attend nonpublic schools.[7] , [8] For the 2021 school year, lower-performing districts were more likely than higher-performing districts to lose students in this way, as seen in Figure 4.

Figure 4: Relationship between District Quality and Share of Students in Nonpublic Schools from Academic Year Ending in 2020 to Academic Year Ending in 2021



Source: Ohio Department of Education and Workforce

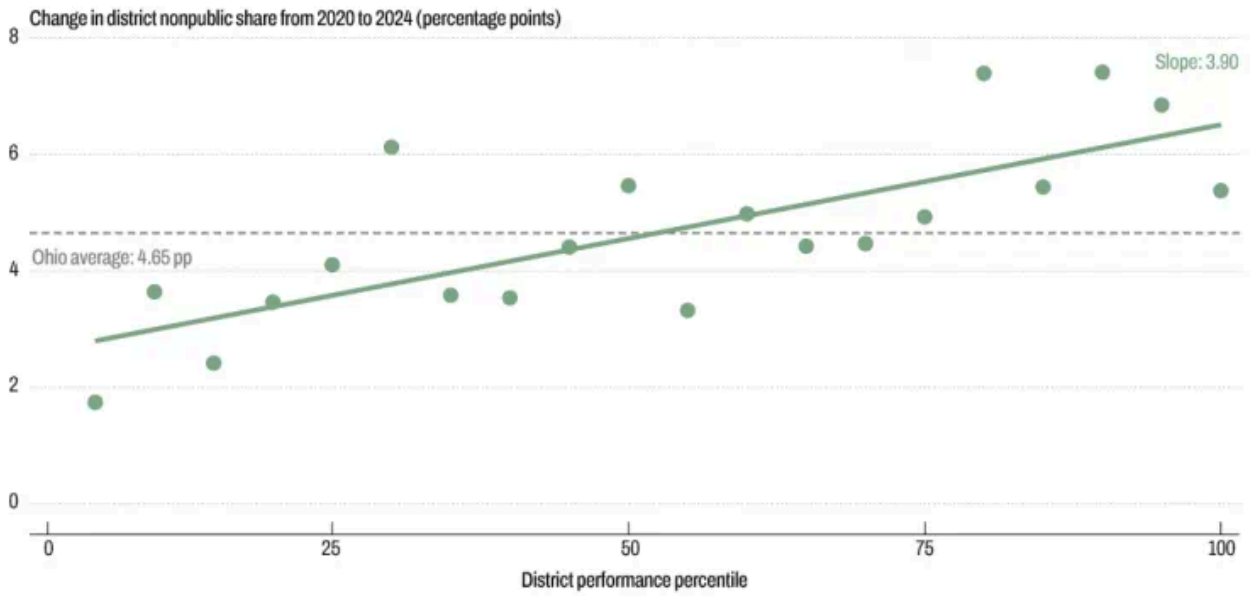
Notes: Figure displays a binscatter of the change in nonpublic enrollment share between the 2019–2020 and 2020–2021 school years, plotted against each school district's performance index score from the 2018–2019 school year. Districts are grouped into 20 equal-sized bins based on this score, weighted by each district's 2019 enrollment. The solid green line shows the linear fit between district performance and the change in nonpublic enrollment share, with the slope printed near the top left of the plot. The gray dashed line marks Ohio's statewide average change in nonpublic enrollment share.

This relationship reversed following a change in Ohio law, effective in July 2023, that expanded scholarship eligibility by relaxing income and geographic requirements. This enabled middle-income families to qualify for the full scholarship and all families, regardless of income, to receive a partial scholarship. Critically, the expansion had disproportionate effects

in high-performing districts for two reasons. First, relaxed income requirements benefited families already paying full nonpublic tuition who previously earned too much to qualify and cleared the most significant hurdle to scholarship receipt by already having been admitted. Because household income and district performance are strongly correlated, this change disproportionately affected higher-performing districts. [9] Second, eliminating geographic restrictions, which had previously targeted lower-performing schools, opened eligibility to high-performing districts for the first time. For these families, scholarships made nonpublic education newly affordable or provided financial relief for those already enrolled.

A key consequence of the expansion was weakening the relationship between scholarship receipt and enrollment change. Prior to 2023, scholarship receipt reliably indicated students leaving traditional public schools. The new pathway, from nonpublic-without-scholarship to nonpublic-with-scholarship, means increases in scholarship receipt no longer solely reflect enrollment shifts.

Figure 5: Relationship between District Quality and Share of Students in Nonpublic Schools from Academic Year Ending in 2020 to Academic Year Ending in 2024



Source: Ohio Department of Education and Workforce

Notes: Figure displays a binscatter of the change in nonpublic enrollment share between the 2019–2020 and 2023–2024 school years, plotted against each school district's performance index score from the 2018–2019 school year. Districts are grouped into 20 equal-sized bins based on this score, weighted by each district's 2019 enrollment. The solid green line shows the linear fit between district performance and the change in nonpublic enrollment share, with the slope printed near the top right of the panel. The gray dashed line marks Ohio's statewide average change in nonpublic enrollment share.

By 2024, the share of students requesting and receiving nonpublic school scholarships increased more in higher-performing districts than students from lower-performing districts as seen in Figure 5. Across all districts, the share of students receiving scholarships to attend nonpublic schools increased by 4.65 percentage points relative to the 2020 share.

As noted, the change in scholarship receipt cannot be interpreted simply as enrollment change, because it reflects two distinct phenomena. First, some students enrolled in TPS in 2023 transferred to nonpublic schools and received scholarships, representing genuine enrollment shifts between alternatives. Second, some students already attending nonpublic schools became newly eligible for scholarships under the expanded program.

This second group appears in our school choice data for the first time in 2024, entering both the numerator (scholarship recipients) and the denominator (total students enrolled in a TPS district or participating in a school choice program) simultaneously. The magnitude of this effect is substantial. The net increase in students receiving scholarships from 2023 to 2024 is more than double the net change in students exiting TPS over the same period (Crawford and Carreon, 2024), meaning that the majority of new scholarship recipients were already enrolled in nonpublic schools.

This measurement issue explains the level increase in scholarship receipt but not the slope reversal in Figure 5. The reversal stems from the expansion relaxing constraints particularly binding in higher-performing districts: geographic restrictions and income thresholds that excluded middle-income families. Combined with lower barriers for students already enrolled, these changes produced both universal increases and disproportionate gains in higher-performing districts.

Absent the policy change, it appears likely that students in lower-performing districts would have continued to receive more scholarships than students in higher-performing districts. For instance, when we conduct the district quality–scholarship exercise for the 2022–2023 school year, the school year before the expanded law went into effect, the lowest performing districts lost more students than the highest performing districts, a sharp increase from the 2021 relationship seen in Figure 4.

Despite increased scholarship access in higher-performing districts, students from lower-performing schools continue moving to nonpublic schools. Whether this movement improves outcomes remains uncertain. Some research suggests nonpublic schooling improves college attainment and earnings, though it is difficult to rule out that pre-existing differences in student ability or family characteristics—rather than school type—drive these results (Owyang and Vermann, 2012; Macmillan and Vignoles, 2013; Harris, 2025).

Evidence from an earlier EdChoice expansion in Ohio found scholarship recipients performed worse on state tests but were substantially more likely to attend and complete college relative

to a matched set of students within the same public school (Chingos et al., 2025). [10] However, that analysis focused on the program when restricted to low-income students from struggling schools, so generalizability to the current universal program is unclear.

Conclusion

The COVID-19 pandemic spurred a large and sustained movement of students from traditional public schools to eschools, home education, and nonpublic schools. Lower-performing school districts lost students predominantly to eschools and nonpublic schools, while transitioning into home education was more prevalent in middle-performing districts. The consequences of these changes on the labor force will not be fully observed for some time; in some cases for more than a decade.

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Endnotes

1. See National Center for Education Statistics (2024) for the national picture and Francis and Goodman (2025) or Bacher-Hicks et al. (2024) for state-specific examples. Return to 1
2. We find that a school district's performance index is highly predictive of both high school graduation rate and college matriculation. A 10-point improvement in performance index corresponds to a 3.3 percent increase in graduation rates and a 6.5 percent increase in the share of students enrolled in college two years after graduation. Return to 2
3. We cannot observe home education counts by grade, a limitation which means we cannot net out presumable kindergartners from the home education total; therefore, Figure 1 presents "residual" counts of pre-k and kindergarten TPS students. That is, we take the difference between the overall TPS loss and the gains to each educational alternative to obtain the proportion of pre-k and kindergarten students not accounted for in other sources. Return to 3
4. One possible explanation is that pre-K is not universally available, meaning that demand for spots may exceed supply. When this occurs, enrollment numbers can bounce back quickly after disruptions as families continue to seek available spots. For more, see the National Institute for Early Education Research report on Ohio, *https://nieer.org/sites/default/files/2025-04/ohio_2024.pdf*. Return to 4
5. The performance index attributes a point value to each achievement level (untested/0.0, limited/0.3, basic/0.6, proficient/1.0, accomplished/1.1, advanced/1.2, advanced plus/1.2) on state tests. At the district level, all points from all tests and grade levels are added together and divided by the total tests that should have been taken. Therefore, an index

value of 100 would imply that students in the district across all grades and tests scored proficient on average. Return to 5

6. The change in the share of students within a public school district is defined as

$$Change\ in\ share_d^{k,e} = \frac{Total\ Students_d^{k,e}}{Total\ Students_d^{k}} - \frac{Total\ Students_d^{2020,e}}{Total\ Students_d^{2020}}$$

for public-school district *d*, year *k* ∈ (2021, 2024), and enrollment type *e* ∈ (pre-k/k, home education, eschool, nonpublic school). Return to 6

7. The most common scholarship received by Ohio K-12 students is the Education Choice (EdChoice) scholarship. Ohio also offers more targeted scholarships, including the Cleveland Scholarship program (for students in the Cleveland Municipal School District), the Jon Peterson Special Needs Scholarship (for students with special needs), and the Autism Scholarship (for students with autism). Return to 7
8. At the school district level, our data are for the number of students attending nonpublic schools on a scholarship. This is because we are unable to connect students not receiving scholarships to a particular school district. Return to 8
9. The rank-rank correlation between median household income (ACS 5-year 2015–2019) and district performance (average 2018–2019 performance index score) is 0.71 (wherein 1 is perfect correlation, and 0 is no correlation), indicating that district income is strongly predictive of district performance. Return to 9
10. The authors additionally find that EdChoice-eligible students who remained in public schools that were just barely eligible for the program experienced marginally higher college graduation rates and college attendance in comparison to students who attended schools that made them barely ineligible. Return to 10

Suggested Citation

Jayaram, Mukund, and Craig Sylvera. 2026. “Where Did the Ohio Public School Students Go?” Federal Reserve Bank of Cleveland, Economic Commentary 2026-28. https://doi.org/10.26509/frbc-ec-202628

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