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Teacher Labor Markets in Metro Atlanta During the COVID-19 Pandemic

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Metro Atlanta Policy Lab for Education

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Background and Motivation

Motivation

The COVID-19 pandemic affected teachers in myriad, unprecedented ways. In spring 2020, most U.S. schools shut their doors and were forced to switch to remote learning. Teachers had little time to prepare for this abrupt change in instructional mode while also navigating their own personal, COVID-related challenges. Many districts started school year (SY) 2020–21 in virtual learning mode and eventually returned to in-person instruction over the course of the year. During this transition, many teachers had to teach students in the classroom while still supporting some students learning from home.

The changes in instructional mode, coupled with general health and economic concerns brought on by the pandemic, negatively impacted teachers. During the pandemic, teachers around the country reported higher levels of stress and burnout.¹ Teachers also reported that they felt a lack of support when making the transition to virtual and hybrid learning.² Further, the Bureau of Labor Statistics (BLS) reported a decline in the K–12 labor force at the start of the COVID-19 pandemic—with numerous states reporting difficulties with filling vacancies in SY 2021–22.³

Context

In light of the reported experiences of teachers during the pandemic, we analyze the impacts of the pandemic on teacher labor market decisions in two large school districts in the metro-Atlanta area: Gwinnett County Public Schools ("Gwinnett") and the DeKalb County School District ("DeKalb"). As with most schools in the U.S., both districts were forced to close their physical schools in spring 2020 due to COVID-19. Both began SY 2020–21 virtually but reopened school buildings later in the school year. Gwinnett began offering in-person instruction during the fall 2020 semester, and DeKalb reopened schools during the spring 2021 semester. After the re-introduction of inperson instruction, both districts continued to offer a remote-learning option to families who wanted their children to remain in virtual learning. For the vast majority of students who returned to in-person instruction, there were still occasions when schools had to close temporarily (and switch to virtual learning) due to local infection rates and staffing shortages.

The two districts also implemented teacher incentive programs for recruiting and retaining teachers. In SY 2020–21 and SY 2021–22, Gwinnett provided a

bonus to new teachers who signed a contract for the following year. The bonus differed by subject area, ranging from \$3,000 to as much as \$6,000 for some special education teachers.⁴ DeKalb implemented both a new-hire bonus of \$2,000 and, for existing teachers, a two-time retention supplement of 3% of a teacher's existing salary. In addition, both districts gave incentives—starting at \$350 in Gwinnett and \$200 in DeKalb—for referring others who signed a contract to work in the district.⁵ Finally, both districts implemented pandemic-related incentives, including bonuses for receiving the COVID-19 vaccine (\$500 in Gwinnett and \$1,000 in DeKalb) and, in DeKalb, a bonus of \$3,500 for teachers who signed an agreement to concurrently teach students both in-person and virtually.

In this report, we aim to provide a better understanding of teacher labor markets in the context of the pandemic and determine appropriate policy interventions in response to changes in teacher mobility and retention.

Existing Literature

Even before the pandemic, there were several well-documented staffing issues in the teaching field. Many studies uncovered shortages of teachers in specific subject areas, including STEM (science, technology, engineering, and math), special education, and English as a Second Language (ESL).⁶ In addition, prior research has demonstrated difficulties in attracting and retaining teachers in schools with high rates of poverty, low average student achievement, and high proportions of Black and Hispanic students.⁷

Further, low salaries and undesirable working conditions, including poor facilities, lack of materials, student misbehavior, and lack of administrative support, have been shown to adversely affect teacher retention.⁸ One factor that has been found to reduce teacher turnover, particularly for Black teachers, is racial and ethnic matching of teachers within a school and matching of teachers and principals.⁹

In addition to potentially exacerbating pre-existing challenges to hiring and retaining teachers, the pandemic has also fueled concerns over the distribution of teachers with varying levels of experience. Numerous studies have shown that teachers are most likely to leave teaching in the first five years.¹⁰ Although higher-quality teachers are less likely to retire (conditional on age and experience), attrition generally increases as teachers approach standard retirement age.¹¹ While age and experience are important to consider in general, they are especially relevant in the COVID-19 context. Crisis teaching

may have placed additional hardships on early-career teachers, and the increased use of technology and health concerns related to the virus may have placed particular hardships on older teachers.

Research Questions

We address the following research questions:

- 1. How did teacher retention change during the pandemic?
- 2. How did the pandemic affect trends in teacher hiring?
- 3. Did the pandemic exacerbate staffing challenges in traditionally "hard-tostaff" areas, like science, math, special education, foreign languages, and ESL?

Data and Measures

Data

This analysis uses administrative data from two metro-Atlanta school districts covering SY 2016–17 through fall of SY 2021–22. The data include information on teacher employment status and (for DeKalb only) the reason for ending employment within a school district.¹² They also provide information on teacher experience, certification, subject area taught, school assignment, and teacher demographic characteristics. For both districts, we define teacher attrition as a situation where an individual is employed as a teacher in the spring semester of a given school year but is not employed as a teacher in the same district in the subsequent fall semester.

It is important to note that, while we have employment data, we do not have information on vacancies. That is, while we observe the number of active teachers and teachers who do not return to teach in the district, we do not observe the number of job openings in the district, so we cannot draw any conclusions about what teacher shortages may exist. Further, we cannot reliably determine the extent to which long-term substitutes or other non-certified instructional personnel are temporarily providing classroom instruction. Therefore, this study only considers teachers who are certified to teach and whose job assignment is as a teacher.



Figure 1. Racial and Ethnic Composition of Students and Teachers by District, SY 2021–22

Notes. White students and teachers are White, non-Hispanic. Black students and teachers are Black, non-Hispanic. Students and teachers of another race are non-Hispanic.

Student and Teacher Characteristics

Both school districts are large, diverse urban/suburban school districts in the metro-Atlanta area, though the two districts differ considerably in the students they serve. In Gwinnett, Black and Hispanic students each make up about one-third of students in the district, and 36% of all students in the district qualify for free or reduced-price meals (FRPM). However, in DeKalb, about 60% of students are Black, and about 70% qualify for FRPM.

While a majority of students in Gwinnett are primarily from historically marginalized racial and ethnic groups, the majority of teachers in the district are White. In contrast, in DeKalb, both a majority of students and teachers are Black. Figure 1 shows the racial breakdown of students and teachers in each district in SY 2021–22.

Further, 80% of teachers in Gwinnett and 77% of teachers in DeKalb are women. Finally, we observe teacher experience (defined as the number of years a teacher has taught in any Georgia public school district): 41% of teachers in Gwinnett and 42% of teachers in DeKalb have fewer than 10 years of experience.

Methods

This study uses descriptive methods to understand how teacher labor markets in two metro-Atlanta school districts have evolved over the course of the COVID-19 pandemic. We first provide graphs showing the proportion of teachers who exit each year, both before and during the pandemic. For DeKalb, we break down the trends in attrition by the stated reason for exit. We also provide graphs for both districts showing attrition rates over time for early-, mid-, and late-career teachers in order to gauge how changes in teacher attrition may be affecting experience levels of the teacher labor force. Second, we visualize the proportion of teachers who are new to each district each year to determine how hiring patterns have changed over the course of the pandemic. Finally, we show teacher attrition patterns over time for teachers in "high-need" subject areas: special education, math and science, and foreign languages/English as a Second Language.

Finding 1: Teacher Retention and Attrition Trends

Attrition in both districts initially decreased after the onset of the pandemic and subsequently increased at the end of SY 2020–21. Attrition in Gwinnett remains lower than the pre-pandemic trend, while attrition in DeKalb is slightly higher than prior to the pandemic.

Teacher attrition patterns over time are depicted for both districts in Figure 2. Prior to the pandemic, attrition was a bit more variable in DeKalb (with annual rates varying from 10.2% to 12.4%) than in Gwinnett (where attrition rates varied between 9.9% and 10.7%). At the end of SY 2018–19, the last prepandemic year, teacher attrition rates in the two districts were nearly identical: 10.8% in DeKalb and 10.7% in Gwinnett. At the end of SY 2019–20, about nine weeks after schools closed, teacher attrition rates in both districts fell—with a larger drop in DeKalb than in Gwinnett. The decline in attrition is consistent with worsening outside employment prospects and greater labor market uncertainty as unemployment rates quickly rose in spring and summer 2020.



Figure 2. Teacher Attrition by District, SY 2016–17 to SY 2020–21

Notes. The attrition rate is the number of teachers who taught in the spring of the given year who do not return to teach in the district in the following year, expressed as a percentage of active teachers in the given year.

Consistent with an improving labor market in 2021, attrition rates rose in both districts at the end of SY 2020–21. In each district, teacher attrition at the end of SY 2020–21 was equivalent to the attrition rate at the end of SY 2017–18. In comparison to the last pre-pandemic year (SY 2018–19), SY 2020–21 attrition rates in DeKalb were higher than in SY 2018–19, and attrition rates in Gwinnett were lower than they were in SY 2018–19.

We find similar attrition patterns for Black and White teachers, which are displayed in Figure 3. White teachers in Gwinnett and DeKalb and Black teachers in Gwinnett experienced very similar attrition rates just prior to the pandemic in SY 2018–19 and during the subsequent two pandemic-era years (SY 2019–20 and SY 2020–21). In contrast, attrition rates of Black educators in DeKalb have been more volatile over the course of the pandemic. Attrition rates dropped from 10.7% prior to the pandemic in SY 2018–19 to 6.8% at the end of SY 2019-20 and rose to 12.7% at the end of SY 2020–21.





Notes. The attrition rate is the number of teachers who taught in the spring of the given year who do not return to teach in the district in the following year, expressed as a percentage of active teachers in the given year. In Gwinnett, 88% of teachers are Black or White, and in DeKalb, Black and White teachers are 95% of all teachers.

Finding 2: Retirements and Attrition of Highly-Experienced Teachers

There was little change during the pandemic in the proportion of teachers in DeKalb who said they exited because of retirement. However, in both DeKalb and Gwinnett, the proportion of teachers with 30 or more years of experience who left their respective districts has been on an upward trend since at least SY 2016–17.

Given DeKalb provided detailed information on the stated reasons for teacher departures, we separately track resignations, retirements, acceptance of a teaching position in another district in Georgia, and other reasons for teacher exit in each year. Other reasons include death, family (including personal illness), advanced study, non-renewal of contract, reduction in force, and failure to meet certification requirements.



Figure 4. Teacher Attrition by Reason in DeKalb County School District, SY 2016–17 to SY 2020–21

Notes. The attrition rate is the number of teachers who taught in the spring of the given year who do not return to teach in the district in the following year, expressed as a percentage of active teachers in the given year. "Other reasons" include death, family (including personal illness), advanced study, non-renewal of contract, reduction in force, and failure to meet certification requirements.

Figure 4 displays the trends in teacher attrition over time, by reason, for teachers in DeKalb. The pattern of attrition rates for each reason type mirror that of overall attrition—an initial decline at the end of SY 2019–20 and then a subsequent increase at the end of SY 2020–21. However, while the year-to-year changes were substantial for most stated exit reasons, the changes in retirement rates were almost imperceptible. Retirement rates moved from 1.8% in 2018–19 to 1.7% in 2019–20 and rose slightly to 2.0% at the end of SY 2020–21.

Another way to dissect teacher attrition rates is to consider differences in attrition by teacher experience. Understanding the relationship between experience and teacher attrition is important for two reasons. First, if attrition rises disproportionately for more-experienced teachers (who are subsequently replaced with early-career-teachers), this would lessen the average level of teacher experience and potentially have negative consequences for student achievement. Second, given the lack of data on the reasons for exit from Gwinnett, the attrition rate of teachers with high levels of experience can shed light on the impact of the pandemic on teacher retirement in Gwinnett.



Figure 5. Teacher Attrition by Years of Experience, SY 2016–17 to SY 2020–21

Notes. The attrition rate in panel A is the number of teachers with less than five years of experience who taught in the spring of the given year and do not return to teach in the district in the following year (expressed as a percentage of active teachers with less than five years of experience in the given year). The attrition rate in panel B and panel C are the same except replacing less than five years of experience with five-to-29 years of experience and 30-or-more years of experience, respectively.

Panel A of Figure 5 illustrates changes over time in teacher attrition for earlycareer teachers (0–4 years of experience), while panel B and panel C map out changes over time in attrition rates for mid-career teachers (5–29 years of experience) and late-career teachers (30 or more years of experience), respectively. Historically, attrition among early-career teachers is high throughout the United States, and this holds true for both metro-Atlanta districts. Prior to the pandemic, in Gwinnett, attrition for early-career teachers was on a downward trend but remained high—ranging from 36.3% in SY 2016– 17 to 26.8% at the end of SY 2018–19. The proportion of early-career teachers who leave continued to decline throughout the pandemic, dropping from 26.8% at the end of SY 2018–19 to 16.2% after SY 2020–21. In DeKalb, attrition of early-career teachers was on an upward trend prior to the pandemic, moving from 26.7% in SY 2016–17 to 29.4% in SY 2018–19. During the pandemic years of SY 2019–20 and SY 2020–21, the attrition rate for early-career teachers in DeKalb follows the same pattern as for all teachers: declining from 29.4% in SY 2018–19 to 12.3% in SY 2019–20 and then rebounding to 20.4% at the end of SY 2020–21 (which is still well below the pre-pandemic attrition rate).

For mid-career teachers, attrition rates are relatively low, ranging from about 7.5% to 10.0% (panel B of Figure 5). In Gwinnett, attrition of mid-career teachers has been relatively flat over time, ranging from 6.7% to 8.0% over the SY 2016–17 to SY 2020–21. There has been a little more variation in attrition rates of mid-career teachers in DeKalb: Attrition rates declined from 7.0% in SY 2018–19 to 5.4% in SY 2019–20, then rebounded to 10.1% in SY 2020–21.

Panel C of Figure 5 displays attrition trends among the most-experienced teachers (those with 30 or more years of experience). This is the experience level for teachers to receive full retirement pay under the traditional definedbenefit plan in Georgia. In both districts, we observe a general upward trend over time in attrition rates for late-career teachers, with a diminished rate of growth (Gwinnett) or slight decline (DeKalb) between SY 2019–20 and SY 2020–21. Consistent with the previous results on teacher retirements, this suggests that the pandemic did not lead to massive departures of highly-experienced teachers from either Gwinnett or DeKalb.



Figure 6. Proportion of New Teachers by District, SY 2017–18 to SY 2021–22

Notes. The proportion of new teachers in each year equals the number of new teachers as a percentage of active teachers in the given year.

Finding 3: New Teacher Hiring Trends

The proportion of new hires in both districts dropped soon after the start of the pandemic and has subsequently risen in both districts. However, the proportion of new teachers in Gwinnett has increased relative to the pre-pandemic period, while the proportion of new teachers in DeKalb is well below pre-pandemic levels. These changes, however, have not impacted average student-teacher ratios.

Figure 6 illustrates the trends in new teachers over time in both districts. We define new teachers as teachers who were not employed by the district in the previous school year. Thus, new teachers can include rookies and more-experienced teachers transferring from other districts. The proportion of teachers in Gwinnett who were new to their district was relatively constant at just under 6% prior to the pandemic, while DeKalb experienced a decline in the proportion of new teachers in the pre-pandemic period. Consistent with trends in teacher attrition described above, both districts experienced a slight decline in the proportion of new teachers in the fall of SY 2020–21 (relative to pre-pandemic trends) and then a sharp increase in the fall of SY 2021–22. However,



Figure 7. Active Teachers as a Percentage of Enrolled Students, Fall SY 2017–18 to Fall SY 2021–22

Notes. The proportion of new teachers in each year equals the number of new teachers as a percentage of active teachers in the given year.

the proportion of new teachers in DeKalb remained well below pre-pandemic levels and was higher than pre-pandemic levels in Gwinnett.

Of course, hiring could be driven by the need to fill positions vacated by exiting teachers, or it could be a result of changes in student enrollment. If the addition of new teachers does not cover both teacher attrition and enrollment increases, student-teacher ratios would rise and potentially harm student achievement. To gauge the net impacts of teacher attrition, changes in student enrollment, and hiring of new teachers, we plot the number of active teachers in each district as a percentage of students enrolled in the district in the fall of the given year in Figure 7. We observe that the student-teacher ratio remains relatively constant in both districts over time. This suggests that, on average, class sizes have not risen as a result of labor market changes during the pandemic.





Notes. The attrition rate is the number of special education teachers who taught in the spring of the given year who do not return to teach in the district in the following year, expressed as a percentage of active special education teachers in the given year.

Finding 4: Attrition and New Teacher Trends in Hard-to-Staff Subject Areas

While attrition rates have fluctuated over the course of the pandemic, it does not appear that the pandemic has led to a worsening of teacher attrition in hard-to-staff subject areas like special education, math and science, or foreign languages/ESL.

Figure 8 illustrates trends in the attrition rate for special education teachers in both Gwinnett and DeKalb. The two districts exhibit very similar patterns over time, though attrition of special education teachers is consistently six-to-eight percentage points higher in Gwinnett. In both districts, there was an uptick in attrition from SY 2017–18 to SY 2018–19, followed by a sharp decline from SY 2018-19 to SY 2019–20, and then a substantial increase in SY 2020–21 as the general unemployment rate declined during the pandemic. The attrition levels in SY 2020–21 are nearly identical to those in each district in the year prior to the pandemic (SY 2018–19).



Figure 9. Share of New Special Education Teachers by District, Fall SY 2017–18 to Fall SY 2021–22

Notes. The share of new special education teachers equals the special education teachers who are new to teaching in the district as a percentage of active special education teachers in each year.

While attrition patterns for special education teachers were similar across the two districts, Figure 9 shows there were stark differences in the within-district changes in the proportion of new-to-the-district special education teachers over time. In Gwinnett, prior to the pandemic, the proportion of new hires was rising slowly over time. However, after the pandemic began, the proportion of new hires among special education teachers skyrocketed. The percentage of new hires went from 8.2% in fall of SY 2019–20 to 17.2% in fall of SY 2021–22. In contrast, DeKalb had a similar proportion of new-to-the-district special education teachers in fall of SY 2019–20 (7.2%), but the share fell to 6.0% in fall of SY 2021–22.



Figure 10. Attrition Rate for Math and Science Teachers, SY 2016–17 to SY 2020–21

Notes. The attrition rate is the number of math and science teachers who taught in the spring of the given year who do not return to teach in the district in the following year, expressed as a percentage of active math and science teachers in the given year.

Figure 10 shows attrition trends among math and science teachers. In the pre-pandemic period (SY 2016–17 through SY 2018–19), attrition rates were higher in DeKalb (where they ranged from 12% to 15%) compared to Gwinnett (where attrition of math and science teachers varied between 10% and 11%). For both districts, attrition rates fell near the beginning of the pandemic, equaling 10% in both districts. As the pandemic progressed and the labor market generally improved, attrition rates continued to decline slightly in Gwinnett but rose precipitously in DeKalb (reaching 13.2% in SY 2020–21).



Figure 11. Share of New Math and Science Teachers by District, Fall SY 2017–18 to Fall SY 2021–22

Notes. The share of new math and science teachers equals the math and science teachers who are new to teaching in the district as a percentage of active math and science teachers in each year.

Despite the fact that attrition among math and science teachers has either increased during the pandemic (DeKalb) or shown only a modest decline (Gwinnett), Figure 11 shows that the proportion of math and science teachers who are new to the district actually declined substantially during the pandemic in both districts. In Gwinnett, the proportion of math and science teachers who are new to the district fell from 6.4% in fall of SY 2019–20 to 5.1% in fall of SY 2021–22. In DeKalb, the proportion of new-to-the-district math and science teachers declined from 5.4% to 2.8% over the same period. Given the increase in attrition of math and science teachers in DeKalb during the pandemic, this suggests that positions are either going unfilled or that departing math and science teachers are being temporarily replaced by long-term substitutes or non-certified personnel.



Figure 12. Attrition Rate for Foreign Language Teachers, SY 2016–17 to SY 2020–21

Notes. The attrition rate is the number of world language and ESL teachers who taught in the spring of the given year who do not return to teach in the district in the following year, expressed as a percentage of active world language and ESL teachers in the given year.

Finally, we consider the impacts of the pandemic on foreign language teachers (including traditional world language teachers and ESL teachers). As shown in Figure 12, attrition rates trended downward in both districts prior to the pandemic. After school closures in spring of SY 2019–20, DeKalb initially experienced about a 2.5-percentage-point decline in attrition, while the attrition rate in Gwinnett rose by less than one percentage point. Interestingly, as the general unemployment rate fell in 2021, attrition rates for foreign language teachers in DeKalb rose (as one might expect with improved opportunities in other districts and outside of teaching), but attrition rates actually declined in Gwinnett.



Figure 13. Share of New Foreign Language Teachers by District, Fall SY 2017–18 to Fall SY 2021–22

Notes. The share of new world language and ESL teachers equals the world language and ESL teachers who are new to teaching in the district as a percentage of active world language and ESL teachers in each year.

As illustrated in Figure 13, the proportion of foreign language teachers in Gwinnett who are new to the district has risen steadily during the pandemic, despite the fact that attrition rates have declined. One possible explanation is that world language and/or ESL programs are expanding in the district. In DeKalb, the proportion of new-to-the-district foreign language teachers varies widely from year to year; there is no clear trend over time.

Conclusion

In this report, we examine attrition and hiring trends of teachers in two metro-Atlanta school districts before and after the onset of the COVID-19 pandemic. In both districts, we find that attrition rates decreased immediately following the school closures in spring of SY 2019–20 when the pandemic initially led to higher unemployment and greater labor market uncertainty for all workers. However, as general labor market conditions improved, teacher attrition rates subsequently increased in both districts, with attrition in Gwinnett remaining lower than pre-pandemic trends and attrition in DeKalb being slightly higher.

We also explore the extent to which the pandemic may have differentially affected teachers with varying levels of experience. For highly-experienced teachers, there has been a concern that the transition to virtual instruction during the pandemic may have been more difficult and led them to choose early retirement. At the other end of the experience distribution, early-career teachers-who may be relatively "tech-savvy" but are also still learning their craft—may have been impacted by the loss of in-person contact with potential faculty mentors. As DeKalb provided detailed information on the reasons that teachers do not return to teach in the following year, we are able to look specifically at teacher retirements and find that there is little difference in retirement rates pre- and post-pandemic in DeKalb. We also consider the proportion of teachers who leave their respective districts by years of teaching experience in both districts and find that attrition rates for teachers with 30 or more years of experience have been increasing since at least SY 2016–17 with no clear change in that trend after the start of the pandemic. For early-career teachers, we find that attrition had been trending downward in Gwinnett prior to the pandemic and has since leveled off. In DeKalb, attrition had been on an upward trend before the pandemic, but current levels are lower than pre-pandemic trends. Finally, we find little variation between pre- and postpandemic attrition rates for mid-career teachers.

We also consider trends in the hiring of new teachers. In both districts, we observe that the proportion of teachers who are new to their district decreased immediately following the school closures in spring 2020 but that hiring rates have since increased. The decrease in hiring may be related to the previous finding of a drop in attrition rates, as there were fewer vacancies to be filled by the districts. While the proportion of new-to-district teachers in Gwinnett has returned to pre-pandemic levels, the proportion of new teachers in DeKalb remains lower than pre-pandemic trends predicted. However, DeKalb has experienced a decrease in student enrollment following the onset of the pandemic, which would lessen the need to hire additional faculty. Student-teacher ratios in each district have remained relatively constant over time, suggesting that average class sizes have not changed considerably despite changes in teacher labor markets.

Finally, we look at changes in teacher attrition and hiring in hard-to-staff subject areas, including special education, math and science, and world languages/ESL. We find that, despite fluctuations in overall attrition rates, the pandemic does not appear to have led to a worsening of teacher attrition in these subject areas. In both districts, we observe that the attrition rate of special education teachers in SY 2021–22 was similar to the rate in the last pre-pandemic year (SY 2018-19). While the share of new teachers in special education was similar in both districts before the pandemic, this proportion has subsequently

increased substantially in Gwinnett and decreased slightly in DeKalb. For math and science teachers, we observe higher attrition rates in DeKalb, with attrition in both districts decreasing after the school closures in spring of SY 2019–20. After SY 2019–20, we observe that attrition rates continued to decrease in Gwinnett while attrition rates rose to pre-pandemic levels in DeKalb. However, the proportion of math and science teachers who are new to the district has actually declined substantially during the pandemic in both districts. Given the increase in attrition in DeKalb, we infer that either positions have gone unfilled or positions may have been filled by non-certified personnel or longterm substitutes. Finally, we consider world language and ESL teachers. In both districts, attrition had been on a downward trend prior to the pandemic. In Gwinnett, attrition slightly rose and then decreased during the pandemic, while attrition rose substantially following SY 2020-21 in DeKalb. We also observe a steady increase in new foreign language teachers in Gwinnett, possibly due to expanded world language and/or ESL programs in the district. However, we cannot make any conclusions regarding new foreign language teachers in DeKalb.

Overall, while there have been changes in attrition and teacher hiring over time, most post-pandemic observations appear to have reverted to pre-pandemic trends. Our initial analysis has been descriptive and is not designed to uncover causal relationships. However, our findings suggest that the net impacts of the pandemic on teacher labor markets in these two metro-Atlanta districts are not as large as many initially feared. That said, pre-pandemic challenges to recruiting and retaining teachers remain, particularly in "high-need" areas like math and science and special education. Careful analysis of pandemic-era financial incentives, such as those used by the two districts in this study, are warranted to determine if these policies could help address teacher shortages in specific subject areas moving forward.^{13,14}

As every school district faces different circumstances, including the two in this study, we recognize that these results may not generalize to other districts— even in metro Atlanta. However, our results are similar to those found in other areas of the country. For instance, researchers have found that recent attrition rates in Washington State are comparable to attrition rates pre-pandemic.¹⁵ Additionally, studies of teachers in Arkansas and Massachusetts found that retention was relatively stable immediately following school closures and that attrition rates increased at the end of SY 2020–21.¹⁶

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5. Gwinnett's referral bonus per new teacher varied based on the subject area of the referred teacher. Referring a special education teacher resulted in a bonus of \$450, referring a speech language pathology teacher resulted in a bonus of \$500, and referring a teacher in any other subject area resulted in a bonus of \$350. These bonuses were given after a new teacher had worked for 60 days. DeKalb had one bonus amount of \$200 per referral and bonuses were given in the middle of the school year.

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Housed in the Andrew Young School of Policy Studies at Georgia State University, we have three components: the Metro Atlanta Policy Lab for Education (metro-Atlanta K–12 public education), the Child & Family Policy Lab (supporting children, families, and students through a cross-agency approach), and the Career & Technical Education Policy Exchange (a multi-state consortium exploring high-school based career and technical education).

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