The Politics of Pandemic School Operations for Reopening and Beyond: Evidence from Virginia

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Abstract: Post COVID, is education losing its special status as a policy domain more insulated from partisan politics than other policy areas? Indeed, a community's political makeup influenced its' schools' pandemic learning modality, but did it predict other aspects of educational operations? We study the role of Republican vote share, race, markets, and public health in predicting a range of operations—from modality to family engagement to social-emotional support to teacher professional development—in Virginia. Vote share and racial composition were similarly predictive of initial in-person offerings but vote share was less predictive over time, and school operational decisions were less politicized than modality. Findings provide optimism for leaders seeking to avoid highly polarized dynamics, especially on issues that have not become nationalized.

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Introduction

Popular press coverage suggests that education policy has become subsumed by national, partisan political dynamics during the pandemic and its aftermath. This troubles those who have traditionally viewed education as one of the social policy areas with the greatest potential for bipartisan cooperation and potentially presents a barrier to attracting and retaining those considering careers in schools. However, much of the evidence for the narrative of increased partisanship has focused on the decisions made in the early days of school reopenings about whether to provide in-person learning. Public opinion on this topic mirrored the cleavages over reopening in society at large. Perhaps even more relevant is whether these heightened partisan dynamics extended to decisions over typical day-to-day educational operations—such as the extent to which schools engage families, keep academic expectations high, provide development opportunities for teachers, and make supplemental learning supports available for students.

The purpose of this paper is to understand whether the partisan makeup of a local community played a role in predicting a broad range of operational decisions districts made over the course of the first full reopening year after the pandemic's onset (2020-21). We examine these topics in the uniquely interesting context of Virginia where a novel original data source allows us to examine whether the voting patterns of a community predicted not only learning modality but a wide range of school operational decisions. We address the following research question: what community characteristics were the strongest predictors of school district operations during the first reopening year? We compare predictors including a community's partisan makeup, public health metrics, racial and other demographic characteristics, as well as role of market forces as measured by the share of students attending private schools. We use multiple regression methods and standardize predictors to allow for a comparison of magnitudes.

We find that our measure of the partisan makeup of a community—Republican vote share—and racial composition were similarly predictive of initial in-person offerings but vote share was less predictive over time, and school operational decisions were less politicized than modality. Therefore, despite signs that education policy was highly politicized in the Virginia context—such as a 2021 gubernatorial election focused in large part on parental rights in education—our results suggest that education policy over this wider range of operational factors was not as politicized as the initial learning modality decisions which appear to have been nationalized by partisan cues from high-profile federal leaders. Our study contributes to the literature by examining a broader set of school district operational decisions beyond learning modality—including family engagement, social-emotional supports, health protocols, assessment use, the level of expectations for teachers and students, teacher professional development, technological support, and learning needs support—and a longer time period than some of the previous studies in a uniquely interesting policy context. Enduring questions about the role of partisan politics in education relative to other policy domains motivate our interest in these issues even beyond the height of the COVID pandemic.

Theoretical Background

Political polarization in the United States (U.S.) has increased dramatically over the past four decades and seeped into a wider range of domains both related and seemingly unrelated to public policy (Iyengar et al., 2015). Education has traditionally been considered unique relative to other policy areas and, therefore, provides a particularly interesting context in which to study political polarization (Henig, 2013). The institutions primarily responsible for education policy decision-making—local school boards—were designed in ways specifically intended to insulate them from national and statewide partisan political dynamics, as well as local patronage politics

(Kirst, 2004; Tyack, 1974). These boards are single-purpose institutions that focus solely on education and operate separately from the rest of local government, in contrast to general-purpose governments like city councils and municipalities that take up decisions related to a variety of policy areas (Kirst & Wirt, 2009). School board races are often nonpartisan affairs in which ballots do not inform voters of the candidates' party affiliations and are often held "off-cycle"—in different years than national elections (Anzia, 2014). Although school systems are not immune from political forces, public opinion on education issues has historically been less polarized based on citizens' party affiliations than other policy topics (Houston, 2021; Shapiro et al., 2021). Notable education policies have been supported by unusual bipartisan coalitions, including the two most recent reauthorizations of the central federal K-12 law: the No Child Left Behind and Every Student Succeeds Acts (Henig et al., 2017).

Over the past several decades, however, scholars have documented a decline in what Henig (2013) has termed "educational exceptionalism" as leaders at more centralized levels of government and in executive roles have taken on greater authority over schools, as evidenced by a more prominent federal role in educational accountability (Peterson, 2016) and a rise in reforms such as mayoral control and state takeover, among other changes (e.g., Schueler, 2024). This has been accompanied by an increase in partisan polarization when it comes to mass public opinion on education policy issues (Houston, 2024). School boards have come into the media spotlight as a local venue for national culture wars around hot-button issues of identity politics concerning race, gender, and sexual orientation, manifesting in discussions about critical race theory in the curriculum, banning books with content perceived by some to be sexually explicit, and bathroom policies (Brookings, 2021; Collins, 2022; Kogan, 2022; White et al., 2023). National organizations such as "Moms for Liberty" have begun endorsing local school board

candidates around the country who champion their right-wing approach to "parental rights" in education (Perera et al., 2024). Given these shifts in education governance and partisan polarization, are the politics of education becoming increasingly wrapped up in a more nationalized, partisan, political dynamic? Has COVID-19, which brought about the most substantial disruption to the nation's school system in our lifetimes, made the politics of education as polarized as other policy areas in the U.S.? The role of partisanship in shaping school reopenings and operations in the aftermath of the pandemic's onset provides an important context in which to explore these questions, particularly given school boards were primarily responsible—both nationally and in Virginia—for approving district plans for reopening.

Literature Review

The Politics of Pandemic School District Operations. While governors in all states closed schools in Spring 2020, states left reopening decisions to the districts in the fall, paving the way for substantial local variation in operations during the first reopening year (Grossman et al. 2021). The existing evidence suggests that partisanship has played a significant role in local post-pandemic educational policymaking. With a primary focus on the initial decisions regarding the learning modality (i.e., in-person, hybrid, or remote) that would be used as PK-12 schools reopened in the fall of 2020, scholars have documented that the share of a local community voting for a Republican candidate in a pre-pandemic election was more predictive of whether the schools in that community reopened for in-person learning than public health measures (Singer, 2022). More specifically, districts home to a greater share of Republican voters were more likely to offer in-person learning. This pattern held with national data (DeAngelis & Makridis, 2021; Harris & Oliver, 2021; Hartney & Finger, 2021; Valant, 2020) as well as statewide data from New York (Fox et al., 2021) and Michigan (Grossman et al., 2021). Research also suggests that

the partisan lean of school board members shaped pandemic-era decision-making (Kitchens & Goldberg, 2024; Kretchmar & Brewer, 2022). Most of these studies find that public health measures played some role, particularly those that look beyond the initial reopening to modality changes throughout 2020-21. However, within states, the predictive power of vote share tended to be a stronger predictor of initial fall modality than measures of COVID-19 incidence.

These findings on the predictors of PK-12 learning modality are consistent with the association between the political makeup of a community and a variety of other aspects of education and public health policy and opinion in this period. For example, statewide partisan vote share was more predictive of the likelihood that institutions of higher education reopened for in-person instruction in fall 2020 than health metrics (Snideman et al., 2022) and was predictive of the speed with which states eased broader social distancing policies (Adolf et al., 2021). Public opinion data has shown a strong connection between party affiliation and willingness to stay home and take steps to mitigate disease spread (Clinton et al., 2021) and support for masking in general (Milosh et al., 2021), as well as masking and vaccine mandates in schools (Henderson et al., 2021; Silver et al., 2022). In all cases, communities with a greater share of Democratic voters were more supportive of mitigation efforts and less likely to experience in-person school reopenings.

One limitation of this literature is that most studies that have examined the relative importance of vote share versus public health factors in explaining PK-12 learning modality after the onset of the pandemic have focused on the initial fall 2020 reopenings. It is important to understand how these relationships might have changed over time, especially given the fall reopening decisions occurred not long after then-President Trump publicly called for a return to in-person learning in spring 2020 and not long before the November 2020 presidential election

(Kogan, In Press). Previous research has shown that high-ranking public officials such as U.S. presidents, including Trump, have the ability to polarize opinion with their public statements. This is true in education (Collins, 2023; West et al., 2018) and beyond (Achen & Bartels, 2017; Lenz, 2012; Popkins, 1991; Satherly, 2018; Zaller, 1992). More specifically, when a high-profile partisan leader speaks out on policy issues in ways that are consistent with their party's traditional position on an issue, it tends to have a polarizing effect on public preferences. In contrast, cross-party cues—when a public official expresses an opinion that runs counter to their party's traditional position—it can be de-polarizing (Houston & Barone, 2024). As a result, the differences in initial school reopenings based on voting behavior could have reflected the momentary salience of reopenings and the association of in-person learning with the sitting Republican president. To grasp the enduring entanglement of education policy in national political dynamics, we must extend our analysis beyond the beginning of the 2020-21 school year. Indeed, studies that have examined these relationships over time have found that vote share remained predictive of learning modality nationwide (e.g., Christian et al., 2022) but was less predictive by February 2021 (Harris & Oliver, 2021) and by the end of the 2020-21 year (Houston & Steinberg, 2023) than it was in fall 2020.

Education researchers have also demonstrated that politics played a role in shaping school reopenings through the influence of organized labor. Studying 250 large districts across the U.S., Marianno and colleagues (2022) find that communities with greater teacher union influence spent fewer weeks learning in person in the fall of 2020. With broader national samples but different measures of union strength, DeAngelis and Makridis (2021), Harris and Oliver (2021), Hartney and Finger (2021), and Houston and Steinberg (2023) all come to similar conclusions. Singer and colleagues (2022) undertook deep-dive case studies of five urban

districts and also found that the organized labor landscape and features of the local labor market played a key role in determining school reopening outcomes and timing, though in ways that were interrelated with pandemic conditions, partisanship, and parental preferences. This all suggests that education policymaking in the pandemic environment has hardly been insulated from politics in the way that those who designed our local school board governance system likely imagined it would.

Race and Pandemic School District Operations. Despite the empirical evidence on the political dynamics of pandemic era educational decision-making, scholars have recently sought to complicate the "politics or science" framing that dominated earlier public discussions about school reopenings (Singer et al., 2022). One key factor that has sometimes been underappreciated in these conversations is the role of race. Indeed, researchers have documented that the racial composition of the district was associated with differences in which districts experienced the most in-person learning. For example, using anonymized mobile phone data on people's movements, Parolin and Lee (2021) infer that remote learning in the fall of 2020 was more common in schools serving higher shares of Black, Hispanic, or Asian students. Similarly, Haderlein and colleagues (2021) use nationally representative parent survey data from April 2020 to May 2021 to document that Black and Hispanic students had less access to in-person learning than White students. These findings were consistent with patterns found in Virginia, the context of the present study (Sachs et al., 2022-a).

Of course, race and ethnicity, party identification, and risk of exposure to COVID-19 are all correlated with one another, which complicates the task of isolating the unique role of race. There are, however, a few studies that have attempted to use multivariate models to tease out the relative importance of each of these factors, suggesting that race indeed played a unique role.

Camp and Zamarro (2021) analyze a nationally representative survey and find racial and ethnic differences in the extent to which students accessed in-person learning in fall 2020, even controlling for political leanings and public health measures, with Black and Hispanic students experiencing less in-person learning than White students. Using national data, Harris and Oliver (2021) find that schools in districts serving greater Black and Latino/a populations were more likely to have remote instruction in both fall of 2020 and through February 2021, even controlling for vote share and COVID-19 positivity measures. These authors also find that, in the fall, the Democratic vote share in the community was more predictive of learning modality than the racial composition by about twice as much. By February 2021, however, the role of politics had decreased while the role of race remained constant, such that both factors were equally predictive of remote learning rates. What is less clear is the extent to which racial and ethnic differences in access to in-person learning reflected race-based differences in parental preferences for in-person schooling, an issue we return to in the discussion section.

Pandemic Operations Beyond Learning Modality. Another key limitation of the existing research on predictors of pandemic era education policy is its exclusive focus on learning modality as a measure of school operations. This has typically been operationalized as a binary measure of in-person learning (or not), share of days spent in-person, or as a categorical measure of learning modality (fully in-person, hybrid, or fully remote). Indeed, this is an important outcome given initial evidence suggesting that, regardless of the potentially legitimate health risks it involved (e.g., Goldhaber et al., 2022a), in-person learning did provide an academic advantage for students relative to remote learning and race- and class-based in-person learning opportunity gaps appeared to contribute to widening inequality in academic outcomes (Jack et al., 2022; Goldhaber et al., 2022b). However, there are a host of other aspects of school

operations—beyond learning modality—that also affected student and teacher experience during this period. There was likely substantial variation in how much support districts provided families for home-based learning, how much social and emotional support they provided for students and staff, the extent to which districts used assessments and preserved academic expectations, the extent to which they provided individualized instructional supports to students, the use of synchronous versus asynchronous instruction, the technology supports they provided, and more.

Our Contribution from the Virginia Context. Unfortunately, the literature has not yet explored these aspects—beyond learning modality—of how schools operated and how students and staff experienced reopening, let alone examined the relative role of political affiliations, race, markets, and public health in predicting differences in these operational characteristics. High-profile partisan elected officials, especially at the national level, were less likely to publicly wade into issues related to these more day-to-day decisions about school operations than they were to comment on the closures of schools for in-person learning. Therefore, the field may be overestimating the extent to which partisan politics has seeped into education policymaking through an exclusive focus on learning modality where partisan cleavages mirror opinion on reopening decisions outside of education and where the U.S. President nationalized the issue in the early months of the pandemic.

We address these limitations by examining the predictors of school reopening modality and a broader set of characteristics of pandemic school operations in the context of Virginia, where we developed a unique set of data to track these features of educational operations. These data allow us to contribute to the literature on the factors shaping educational policy in the post-pandemic-onset period in three ways. First, we go beyond an examination of the initial fall 2020

reopening decision to examine learning modality throughout the 2020-21 school year to see whether there is evidence of a more enduring role for politics in education policymaking than can be gleaned from fall 2020 reopenings alone. Second, in addition to modality, we examine a variety of additional dimensions of school district operations based on original coding of publicly available documents (e.g., reopening plans districts submitted to the state after they were approved by school boards, public communications with families). Third, we complicate the politics versus public health narrative that has dominated the discussion by examining additional predictors of reopening—most notably highlighting the role of the racial composition of the district and competitive market forces—in predicting variation in modality and operations.

Beyond the availability of unique data, Virginia is a particularly interesting context in which to explore these topics for at least three reasons. First, in the period under study, Virginia was without collective bargaining. Given previous studies have shown union strength played a role nationally in predicting reopening patterns, it is useful to learn how the other key predictors—vote share, race, markets, and public health—functioned in a context without collective bargaining, a key mechanism through which one of the most powerful interest groups participating actively in education politics influences policy.[1] Second, relative to other states, Virginia relied on uniquely high levels of remote instruction during the 2020-21 school year. Specifically, Goldhaber and colleagues (2022b) place Virginia in the highest quartile among all states for the number of weeks during the 2020-21 school year spent in remote learning. Jack and colleagues (2023) report Virginia had the lowest mean percentage of 2020-21 spent in the fully in-person learning mode (9 percent) of the 12 states in their analysis (versus a state-level mean of 48 percent). Virginia is also an outlier in that it experienced some of the largest post-COVID

[1] Prior to May 1, 2021, Virginia prohibited public sector employees from unionizing and engaging in collective bargaining. Teachers could form and belong to associations that lobbied on their behalf.

declines in academic achievement relative to the rest of the country (Reynolds, Schueler & Miller, 2024; Wyckoff, 2024). Third, in the fall of 2021, Virginia voters elected Republican Governor Glenn Youngkin, who had campaigned, in part, based on his sharp criticism of his Democratic predecessor's handling of the state's school system during the pandemic among other education-related issues. Many observers have speculated—and there are data to suggest—that education was a critical issue in determining the outcome of this race (Barnum, 2021). The Virginia contest was notable both as a case where education policy played a prominent role in a statewide race and a unique example where a Republican candidate had the upper hand on education policy, an area where the Democratic party has traditionally had the advantage with voters (Hess, 2024). Therefore, examining dynamics behind school operations may be especially interesting in this context.

Data and Measures

Reopening Year Operations Data. To measure district operations in 2020-21, we collected and coded publicly available documents generated by each school district to describe and communicate to the public their operations and operational changes throughout the year. Our first wave of data collection included the mandatory reopening plans submitted by all 132 districts to the Virginia Department of Education (VDOE) in advance of the fall 2020 reopening. Before districts submitted to the state, these reopening plans were approved by the school boards in each district. The vast majority of plans mentioned boards or board members, either as committee members who influenced the plans themselves or as having voted to approve the plan. Typically the content of the plans also signaled Superintendent leadership in the process of plan development. In the second wave of coding, we supplemented the original reopening plans with updated plans submitted to the VDOE later in the 2020-21 year and by searching each district's

current website and using The Wayback Machine, an internet archive, to locate updated information about reopening operations throughout 2020-21. Documents included updated plans, superintendents' memos, presentations to school boards, and district website text. We also combed through districts' Facebook pages and Twitter feeds (but social media provided just 6.7% of coded documents). The first wave of data collection yielded one or two documents for each district (some put their health plan in a separate document), while the second wave yielded an average of 8 documents per district ranging from 2 to 26.

The documents we collected measure what districts communicated to the VDOE, parents, teachers, and the broader public about their intentions for school operations and may not entirely reflect what occurred in each district. Results using these data, therefore, are best interpreted as measures of what districts communicated. Although this is not a perfect measure of implementation, the evidence suggests that the plans were reflective of the policies districts implemented. First, these were official policy documents, approved by school boards in each district, and submitted to the state agency, which required the districts to submit official updates to the plans in the case of deviations from the original document. In an official memo to Superintendents, the then-State Superintendent of Public Instruction James Lane remarked, "The Office of Federal Pandemic Relief Programs will continue to monitor compliance with this requirement." Therefore, it seems likely that districts would have been reluctant to deviate significantly from their official documents (without submitting updates).

Second, empirical evidence provides confidence that these plans capture meaningful variation. First, we coded whether the initial plan, released in summer 2020, indicated that the district would be reopening in the remote modality for fall 2020 and compared this to the actual modality in which the district reopened based on our granular learning modality tracking data

(described in detail below). We find that 81 percent of districts indicated in the plan the same modality in which they reopened (the two measures were correlated at 0.7, $p<0.001$). We would not expect these to be perfectly correlated as districts updated their plans between summer and fall of 2020, however, the high degree of consistency between the summer plans and the actual fall modality suggests that the plans did reflect what happened on the ground to a large degree. Additionally, in other work scholars have shown that these district operation measures are correlated with teacher retention rates in Virginia, again suggesting the plans did indeed capture meaningful variation in the way districts were operating (Miller & Schueler, 2024).

We analyzed these documents in two waves, starting with the initial reopening plans and then reviewing these again along with the documents released throughout 2020-21. For each wave, we developed and iteratively refined sets of a priori codes grounded in the work of the Center for Reinventing Public Education (CRPE), a national research organization that collected information on district operations–at least for 100 large and urban districts–in the wake of COVID-19 in real time via the "COVID-19 Response Database" (e.g., Gross et al., 2020). We used these codes because there was an empirical basis to suggest these were the main dimensions on which district plans reflected meaningful policy variation and adapted them to fit the Virginia context. We detail the full set of codes in appendix Tables A1 and A2 and the constructs these codes measured below. Although these codes plausibly reflected policy decisions that could impact student and teacher outcomes, our initial goal was simply to capture meaningful variation in the districts' responses and eventually empirically test (in other work) whether this variation predicted differences in post-pandemic recovery outcomes.

The first wave included 72 codes, and the second included 77 codes. Given the volume of data, our team included a total of 19 unique coders (including four coders in both waves). We

used descriptive coding to tag segments of text and recorded the content of the text for each code as a categorical indicator (Saldaña, 2013). In each wave, a lead coder led an initial whole-group coder training to establish a common understanding of the codes, indicators, shared codebook, decision-rules, and logistics. Next, the whole team of coders coded the full set of documents for the same two districts. The team then met to discuss and resolve discrepancies, allow the lead coder to address any misunderstandings, and update the codebook to minimize future confusion. The group then split in half and each smaller team coded the full set of documents for two additional districts to continue the training and establish interrater reliability. The lead coder coded the documents across both groups so that at least one person had a global viewpoint. At this point, coders reached 80% agreement. The groups then met with the lead coder to reconcile discrepancies and continue to standardize coding procedures. The next step was to break into smaller groups of 3 to 4 coders in which each group had one member who was either the lead coder or a project co-PI. The teams coded documents for three districts on average and reached a rate of over 90% agreement prior to reconciliation. We then moved to alternating between double-coding and single-coding. The lead coder led virtual weekly meetings to reach consensus on all final decisions and also continued to spot-check the single-coded documents for all coders who were not co-PIs to ensure standardization and quality. Ultimately, approximately half of all documents assigned to a coder were coded by more than one person.

Using the resulting data, we undertook Principal Component Analysis (PCA) which led us to eliminate a small number of items. Most of these eliminated items were heavily skewed and therefore did not capture meaningful variation. In other cases, we eliminated a few items for which we did not have a strong theoretical basis for their inclusion in a particular component. This process resulted in eight constructs representing various facets of district operations. We ran

a separate PCA for each of the eight constructs. Given that our items were either binary or ordered categorical, we conducted our PCA on a mixed correlation matrix of all items that included tetrachoric and polychoric correlations, depending on the variable type. Empty cells were corrected for continuity by using a value of 0.5. Each of the PCAs had relatively large and positive loadings for all items, with similar magnitudes across items, and only a single component with eigenvalue greater than one. The full set of constructs and individual indicators used in our analysis have been listed in Table 1, along with the item loadings and fit statistics. None of the constructs have a correlation greater than 0.37 with another construct.

In all eight constructs, higher values represent greater emphasis on that construct. The first construct was "family engagement" which assessed the extent to which the district emphasized engaging with students' families. Example indicators related to whether the district stated it used family feedback to inform reopening plans, provided families with guidance for learning at home, and recommended check-ins with families at the start of the school year. The second construct, "SEL support", measured how much a district emphasized providing social and emotional learning supports to students or staff. Indicators included, for example, whether the district stated it would provide SEL supports for students, that schools were expected to provide counselors or social workers, and acknowledged the SEL needs of staff. The third construct, "assessment use", captured the emphasis districts placed on assessments, including whether they stated there was a plan to assess student learning in the fall and/or to monitor progress throughout the year. Fourth was "expectations" meant to capture the extent to which districts emphasized the expectations they had for students and teachers. These expectations addressed issues such as whether schools were required to provide students with grades, teachers were required to provide feedback on student work, and named a required number of instructional

minutes. “Teacher professional development” measured the extent to which districts emphasized instructional supports for teachers. These included topics such as offering pandemic-specific instructional professional development (PD) or providing coaching for teachers in the remote setting. The sixth construct “health protocols” assessed the extent to which districts emphasized the health precautions they were taking in the reopening year, such as sanitation, providing personal protective equipment (PPE), requiring face masks in instructional spaces, training staff on health best practices, and more. Seventh was “technology support” which included items measuring whether districts said they would provide home-based internet for all students who needed it, devices for a majority of grades, and traditional tech support for at-home learning. The final construct was “learning needs support”, capturing the extent to which districts indicated they planned to provide students with services designed to address the negative impacts of pandemic-related disruptions to learning, such as extended learning time, tutoring, and synchronous instruction.

Learning Modality Data. We constructed a district-by-grade-by-day database to track how the learning modality offered to students changed throughout the year. The initial sources of information were the documents described above. Three coders recorded the weekly attendance rotation (a series of five letters, one for each day, indicating which, if any, students were offered in-person learning) and the day the rotation went into effect. Next, the coders scoured each district’s website, Facebook pages, and Twitter feeds for additional information on changes. As a check on the completeness of the database, the coders took advantage of the fact that the typical district announcements of a change indicated the current attendance in effect. In the few cases where this did not match the rotation in the database, the coders conducted a targeted search for when the current rotation began. The coders also recorded changes that resulted in the district

closing for a day or more, which sometimes occurred after a COVID-19 outbreak. They also consulted each district's calendar to identify the first and last day of the year and school holidays and breaks to calculate a denominator for our percentage of days in-person variable.

Each attendance rotation mapped onto one of three learning modalities. There was one attendance rotation for the fully in-person modality (AAAAA, indicating that all students could attend in-person five days a week) and one rotation for the fully remote modality (RRRRR, indicating that no students could attend in-person on any days of the week). All other rotations indicated some sort of hybrid learning in which students could attend in-person on some days and remote on other days. An example is the ABABR hybrid rotation. This indicates the district divided the grade into two groups (A and B) and that Group A could attend school in person on Monday and Wednesday while Group B could attend in person on Tuesday and Thursday. Each group learned remotely on the days their group did not attend school in person, and both groups learned remotely on Friday.

This rich database allowed us to create multiple measures of learning modality, as shown in Table 2. These included the percentage of the year the district operated in each modality as well as the percentage of the year students were offered in-person learning. This final measure counted the days in the fully in-person modality as well as the in-person learning days from the hybrid modality. For example, students had access to two days of in-person learning under the ABABR hybrid rotation and only 1 day under the ABRCD rotation. We applied weights to each grade when calculating these percentages so that the measures represent the learning modality offered to the average student in the district. Two additional measures count the number of days when the district made a change to any grades' attendance rotation and the number of days when that change resulted in movement across the three modalities.

Predictors Data. We relied on data from several sources to measure the predictors of learning modality and reopening year operations. Summary statistics are provided in Table 3. First, our measure of the political makeup of a given community was based on the share of a given school district's voters that voted for the Republican candidate in the 2016 Presidential election. These data were obtained from the Virginia Department of Elections website. In Virginia, voting precincts generally were all within a single school district which allowed us to calculate voting information at the school district level. We confirmed our results were robust to relying on alternative measures of Republican vote share in a number of pre-pandemic elections other than the 2016 Presidential race (described in the "Robustness Checks" section below).

We obtained public health metrics from the Virginia Department of Health website. These included measures of cumulative county- and city-level counts of COVID-19 cases, hospitalizations, and deaths from the earliest reports in spring of 2020 through late 2021. We prioritized hospitalizations on the theory these were more accurate than case counts and, especially early in the pandemic, were more numerous than deaths. Counties and cities were then mapped onto school districts. (In Virginia, cities are independent from counties. The two towns with separate school districts were mapped to the county in which the town is located.) We then used the overall population size of the district to generate measures of hospitalizations per 100,000 residents as of August 15th, 2020 and January 15th and April 15th, 2021.

Data on the demographic characteristics of the school-going population such as the share of Black, Hispanic, and economically disadvantaged students, and enrollment counts, as well as the number of administrators per district, were drawn from data the VDOE makes publicly available. We used data from 2018-19, the last pre-COVID school year. Finally, we obtained information on the share of students enrolled in private schools within each district as of the

2019-20 school year from the National Center of Education Statistics website to capture the role of market-based competition in school reopening decisions.

Analytic Methods

To assess the relative predictive power of various district characteristics on reopening and operational decisions, we relied on multiple regression which allowed us to test the role of each predictor, holding all the other predictors constant. More specifically, we fit the following model:

$$Y_d = \beta + \alpha P_d + \gamma H_d + \delta' R_d + \lambda' X_d + \varepsilon_d$$

Here, Y_d was an outcome related to school operations during the 2020-21 school year for district *d* such as the percentage of the year spent learning in person or the standardized component score for the extent of SEL support represented in publicly available plans. P_d represented the partisan makeup of a district (share that voted for the Republican candidate) in the 2016 Presidential election. H_d was our public health measure, the number of COVID-19 hospitalizations per 100 thousand residents. R_d represented the racial and ethnic composition of the district in fall 2019, including a measure of the percentage of the student population identified as Black and the percentage identified as Hispanic. X_d was a vector of additional district-level baseline characteristics, including the percentage of students classified as economically disadvantaged, the district's student enrollment, the share of students in the district enrolled in private schools, and annual per pupil expenditures (2018-19).

We ran two versions of our model for each outcome, one with unstandardized predictors to allow for substantive interpretations of the coefficients and another with standardized predictors for a comparison of magnitudes across predictors. The latter allowed us to test the relative role of each factor compared to the others. We did not cluster standard errors as the data were at the district level. Prior to including them in models, we log transformed predictor

variables that were not normally distributed, including our measures of COVID-19 rates, percentage Hispanic, district enrollment, private school enrollment, and expenditures. We followed West (2022) and added a small constant to all values of the log transformed variables to avoid a situation where observations with a value of zero are dropped during the transformation process.

Findings

Describing Virginia's School Districts. We have provided district-level descriptive statistics in Table 3 for all 132 school districts in Virginia. The average district served 9,777 students across 15 schools and had a majority-White student population where 22 percent of students identified as Black and 10 percent Hispanic. In the average district, a little less than half—47 percent—of students were economically disadvantaged and per pupil spending was $12,220 in 2018-19. On average, seven percent of students were enrolled in private schools in 2019-20. Sixty percent of districts were classified as rural. By mid-August 2020, there were an average 89 COVID-19 hospitalizations per 100 thousand residents at the district level. This increased to 247 hospitalizations in January 2021 and 353 in April 2021. Finally, in the average district, 55 percent of voters cast their ballot for the Republican Presidential candidate in 2016.

In Table 2 we have provided summary statistics for the learning modality outcomes, showing that the average district provided in-person learning for 41 percent of the 2020-21 school year. This was largely due to the common use of the hybrid learning modality, which involved some in-person learning. We observed only 7 percent of the year was spent in the fully in-person learning modality for the average Virginia district. Over the 2020-21 year, the average district experienced two changes in learning modality (remote, hybrid vs. fully in-person) and two changes to the rotation patterns for how districts rotated through student groups.

Predictors of Learning Modality. We began by examining the relationships between district characteristics and the share of 2020-21 spent learning in person, the share spent in each of three modalities (fully in-person, hybrid, fully remote), and the number of rotation and modality changes. In Figure 1, we display unconditional bivariate relationships between the percentage of the year spent learning in person and key measures of vote share, public health, and race/ethnicity. We find that the political characteristics of a district were predictive of how much opportunity students had to learn in person in that district throughout 2020-21. More specifically, districts with a larger share of residents who voted for a Republican candidate before the reopening year spent a larger percentage of 2020-21 learning in person. This was true even after controlling for other district characteristics measured before the reopening year including the percentage of economically disadvantaged students, district size, private school sector size, and per pupil expenditures, as we show in Table 4. More specifically, an additional percentage point of Republican vote share was associated with an additional 0.51 percentage point of the year spent learning in person (see column 1). This seemed to be driven primarily by differences between time spent in a hybrid vs. fully remote modality as the fully in-person modality was quite rare.

We found that the racial and ethnic composition of districts was also predictive of reopening decisions. As shown in Figure 1, districts serving larger concentrations of Black and Hispanic students offered less in-person learning. The direction of these relationships remained, even after controlling for the district's partisan makeup along with other district characteristics. More specifically, a one-percent greater share of Black students was associated with 0.28 fewer percentage points of the year spent in person. The relationship for percentage Hispanic remains negative but was smaller than the magnitude for percentage Black and was not statistically

significant using the multivariate model. When we examined the results using standardized predictors (column 2 of Table 4), we saw that the racial composition of the district—specifically the share of Black students—was only slightly less predictive of time spent in person as vote share. Districts serving a larger share of Black students offered less time in a hybrid learning mode and more time in the fully remote mode than students of other racial groups.

We observed a negative unconditional relationship between baseline COVID-19 hospitalization rates and the percentage of the year the district offered in-person learning (see Figure 1), where a higher hospitalization rate predicted less opportunity for in-person learning. However, once we controlled for the other district characteristics, our measure of public health was not a statistically significant predictor of the percentage of the year the district offered in-person learning and the magnitude of the relationship was smaller than that for Republican vote share and for the share of Black students. Districts with higher hospitalization rates made less use of the hybrid mode and more use of the fully remote mode, although neither of these relationships achieved statistical significance using the multivariate model.

The district characteristics we examined were not associated with differences in the number of changes to learning modality or rotation patterns during the 2020-21 school year. The share of economically disadvantaged students served by a district, the share in private schools, and the annual expenditures were not predictive of any of the learning modality outcomes.

The analyses we have presented so far pool outcomes for the entire 2020-21 year which obscures some interesting differences over time. We have illustrated these differences in Table 5 where we display results from the same models described above but where we replaced the outcome with information on the percentage of in-person learning at three particular points in time (during September 2020, February 2021, and May 2021), alongside the cumulative results

for the 2020-21 year as a whole in the right-most columns for comparison. For each column, we replace the measure of COVID-19 incidence with a measure of the cumulative COVID-19 rates on the 15th of the month prior to the month in which the outcome was measured.

As we have shown in the first two columns, COVID-19 rates did predict the extent of in-person learning in the initial reopening, as did vote share and the shares of Black and economically disadvantaged students served by a district. Vote share was the strongest predictor with the COVID hospitalization rates and the shares of Black and economically disadvantaged students having similar predictive power in fall 2020. By February 2021, the only significant predictors were Republican vote share and the share of Black students, and their magnitudes were very similar. The relationship between the COVID-19 rate and in-person learning was much smaller than in September and not statistically significant. The R-squared for February 2021 was slightly higher than in September 2020.

By May 2021, our predictors do a poorer job explaining variation in how much in-person learning districts offered as evidenced by the smaller R-squared. The magnitude of the vote share, public health, and race/ethnicity predictors are all smaller for the May outcome than at the two earlier time points. This was likely because on February 5th Governor Northam ordered districts to begin offering at least some in-person learning by March 15th. We have shown this shift towards more in-person learning in the kernel density plot in Figure 2. Interestingly, only the share of Black students in a district remained a statistically significant predictor of in-person learning in May 2021. Neither vote share nor COVID-19 hospitalization rates appeared to play a role in predicting in-person learning by May 2021.

Predictors of Reopening Year Operations. Next, we turned our attention to the relationship between district characteristics and the features of district operations beyond

learning modality, as captured by our coding of district operations documents released throughout the 2020-21 school year. In Table 6 we have reported unconditional bivariate correlations between each of the district characteristics and the measures reopening year operations identified via PCA. In general, the larger the share of voters supporting the Republican candidate, the lower the district's average emphasis on the reopening operations we measured. More specifically, heavily Republican-supporting districts were less likely to emphasize family engagement, SEL supports, expectations, teacher PD, technology support, and learning needs support, although only some of these correlations achieved statistical significance. The main exception was that the greater the Republican vote share, the greater the emphasis on health protocols which could reflect the fact that Republican-leaning districts were more likely to offer in-person learning and therefore may have been more focused on health protocols than districts that relied on more remote instruction. These correlations for the COVID-19 hospitalization rates were nearly always the opposite sign as those for Republican vote share. Districts with higher hospitalization rates gave greater emphasis to family engagement, teacher PD, and technology support.

When it came to the racial and ethnic composition of the districts, systems serving a greater share of Black students were less likely to emphasize health protocols and more likely to emphasize family engagement and technology support. Almost none of the correlations based on the share of Hispanic students, share of economically disadvantaged students, district size, or per pupil expenditures reached statistical significance. Interestingly, the percentage of students served by private schools was positively correlated with district emphasis on family engagement, SEL support, assessment use, expectations, technology support, and learning needs support, though again only some of the correlations achieved statistical significance.

Of course, many of these district characteristics were correlated with one another, motivating our multivariate regression analysis, the results of which we have reported in Table 7. Once we included all predictors in a single model, virtually none of the individual predictors remained statistically significant. In other words, district characteristics prior to the reopening year were less predictive of these measures of district operations than of learning modality. The R-squared for models predicting district reopening characteristics were between 0.04 and 0.14 whereas the R-squared for our model predicting in-person learning was 0.54—nearly four times higher than the highest reopening model. We estimated that given our sample size and number of predictor variables, we had 0.80 power to detect a minimum "effect" of 0.10 at $p < 0.10$. Therefore, the lack of predictive relationships did not seem to result for an underpowered model. A few relationships were significant, however. Districts with a higher Republican vote share were less likely to emphasize family engagement, and districts with a greater share of economically disadvantaged students gave less emphasis to teacher PD.

The most noteworthy finding from Table 7 concerned the share of students enrolled in private schools which significantly predicted district emphasis on several reopening operations. Specifically, districts with a greater concentration of private school students were more likely to emphasize assessment use (columns 5 and 6), expectations (columns 7 and 8), and technology support (columns 13 and 14) (all correlations that achieve statistical significance). There was also a positive relationship with family engagement, SEL support, and learning needs support but none are statistically significant.

Robustness Checks. We also estimated models using alternative specifications to assess the sensitivity of our results regarding the role of vote share, public health, and race in districts' learning modality and operating decisions. (Results available from authors on request.) First, we

replaced our preferred measure of district political leaning based on the 2016 Presidential election with the Republican vote share for the more recent 2018 contests for U.S. Senate and U.S. House of Representatives as well as 2019 races for State Senate and State House of Delegates. Second, we estimated models using alternate public health measures—COVID-19 cases and death rates. Third, instead of using a district's student population characteristics, we leveraged similar characteristics of the district's residents. To measure the populations' characteristics, we gathered county- and city-level data from the U.S. Census Bureau website on racial/ethnic composition, poverty rates, median household income, and percentage of those 25 years of age and older with at least a Bachelor's degree as of 2019. County- and city-level data on the unemployment rate from 2015 to 2020 came from the BLS website. Our results were not sensitive to any of these alternate measures.

In results shown in Appendix Table A3, we confirmed that our findings on the predictors of district operations were not due to variation in time spent learning in-person by running our model after controlling for various measures of access to in-person learning throughout the year. We also ran a version of these models where we controlled for several measures meant to proxy for district capacity, including the number of total words included in the district's operations plans, the total number of operations documents we found and coded, the number of administrators in the district and the administrator-to-student ratio. As illustrated in Table A3, our findings were consistent regardless of whether we included these controls suggesting that district capacity or willingness to provide more detailed information in their plans did not seem to bias the results.

Discussion

Although partisan politics has never been entirely absent from education policy debates, observers have pointed to education as a policy area with unique potential for bipartisan cooperation relative to other policy domains. However, educational leaders and researchers have become increasingly concerned that education policymaking is losing its special status as a largely local phenomenon, more insulated from partisan politics than other policy areas. Indeed, political polarization in the U.S. has risen, both overall and when it comes to public opinion on education policy issues. The pandemic heightened these concerns given the well-established relationship between the political makeup of a given community and the modality in which their PK-12 schools provided instruction as they reopened in COVID-19's wake. Much emphasis has been placed on the relative role of political partisanship, above and beyond the role of public health risks, in determining the extent of in-person learning offered. Significant recent research on the topic, therefore, suggests that education has indeed become more wrapped up in partisan political dynamics. However, most of this empirical work has been based on an examination of the initial learning modality decisions for the fall 2020 school reopenings which were made at a moment in time when these issues had become nationalized and therefore more polarizing by the country's most prominent partisan—the sitting Republican President.

We examine the extent to which the voting behavior of a community predicted learning modality offerings over time beyond the initial reopenings, in the context of Virginia. We also leverage rich, original data on district reopening operations unlike those analyzed in prior research to explore a wider range of school operations—likely to have impacted the experiences of students, families, and teachers—but not as nationalized as learning modality decisions. These operational decisions for the 2020-21 school year related to issues including family engagement, expectations for students, social-emotional learning, teacher professional development,

technology supports, additional learning supports, and more. Overall, our findings are not consistent with the idea that local education policymaking has become subsumed by partisan political dynamics, at least when it comes to operational issues that have not become nationalized by high-profile officials affliated with a political party.

Our findings do mirror prior research that has identified a political party's vote share as a strong predictor of a district's reopening learning modality. This is true when we considered district decisions in the month of September as well as the full year. Our full-year results suggest this is because districts with lower Republican vote shares were more likely to embrace the fully-remote modality than were districts with higher GOP vote shares to select the fully in-person modality. We believe this highlights the value of our percentage in-person learning measure as it captures all the ways in which the hybrid modality was implemented (Sachs et al., 2022). This finding is not entirely surprising given then-President Trump's early public calls for a return to in-person learning, and prior work suggesting cues from high-ranking officials can heighten polarization when they are consistent with the expected policy position of the elite's political party (Collins, 2023; Lenz, 2012; Popkins, 1991; Satherly, 2018; West et al., 2018; Zaller, 1992).

However, we also observe that the role of political leanings diminished over the course of the first reopening year, echoing other recent papers that have examined these relationships over a longer time horizon. In Virginia, this coincided with then-Governor Northam—a Democrat—mandating that all districts offer at least some in-person learning. This is consistent with previous work suggesting that when prominent elected officials speak out in favor of policy positions that run counter to expectations based on their political partisanship, it can have a depolarizing effect (Houston & Barone, 2024). Additionally, the political makeup—as measured by Republican vote share—of a district did much less to predict aspects of district operations beyond learning

modality. These were operational decisions that had not been nationalized by federal elected officials as had the issue of in-person learning, at least not at the time under study here. Perhaps the findings might shift, for example, on the issue of learning supports after then-President Biden made a push for tutoring and summer learning programs in his 2024 State of the Union speech.

To reiterate, the most significant overarching theme from our analysis is that this set of district characteristics—vote share, race, markets, and public health—had much greater explanatory power concerning learning modality than district operations. In addition to the role of national political figures, we suspect this difference may also be due to the visible and consequential nature of the learning modality decision. The decision to shift to remote instruction, even for a short time, immediately impacts every family who now must adjust their schedule to accommodate care for their children and support at-home learning throughout the day. This impacts employers that rely on parents as workers. On the flip side, perceived health risks for students and teachers were likely more salient when it came to the decision to offer in-person learning than for other features of school operations. As a result, more external voices may have contributed to districts' modality decisions while other operations address more internally focused procedures such as assessment use and PD for teachers. During the reopening year, the public's attention may not have been trained on the internal workings of schools. Perhaps this allowed these decisions to be made based more on the educators' understandings of students' and teachers' needs, freer from external forces than for modality decisions.

The idea that modality decisions were more visible than other educational operations is consistent with our exploratory review of a random sample of minutes, video recordings, and agendas from school board meetings in 14 different Virginia districts held in the summer of 2020 (leading up to the reopening year). We selected the sample within quartiles of the percentage of

the 2020-21 year spent in-person. It should also, therefore, cover communities across the political spectrum. We found that public comments and school board meeting discussions were focused heavily on issues related to the modality decisions. In many cases there was also some discussion of other operational decisions, such as technology support (e.g., "the Chromebook program"), transportation, extended learning time, expectations for students, etc. Discussion of , these issues, however, generally took a back seat to or were often tied back to issues of learning modality (e.g., "if we open virtually, how will we provide technology support?").

Readers will recall that school boards were involved in approving the full reopening plans, including all aspects of operations beyond modality, so it was not the case that school boards had more of an official role in approving modality decisions than the other operational policies. However, the boards seemed to be following the public's lead by focusing meeting time on the first-order issue of modality. Another possibility is that modality decisions were seen as what Sutherland (2023) describes as a matter of "local control" therefore more under the purview of the school board and more subject to community input than other education operational decisions. Perhaps these other issues—family engagement, social-emotional learning, teacher professional development, learning supports, and so on—were perceived as more in the realm of those with educational expertise in the Superintendent's office or central office bureaucracy. Our data do not allow us to get at this possibility directly. Regardless, a primary function of the school board is to oversee and hold accountable the superintendent and, therefore, retain influence over a variety of operational issues.

Unfortunately, we were not able to examine all aspects of educational policymaking including some with great potential for politicization which have put school boards in the spotlight in recent years such as those at the intersection of identify politics and racial, LGBTQ+

and gender issues, as these were not the focus of the district reopening plans. We suspect, however, that policies related to these issues would be correlated with the political makeup of communities given that they too had been nationalized by the sitting President. Indeed, we saw some hints that these issues fell along partisan lines. For example, we observed discussions about school re-namings, statements to condemn racism, and proposals to abandon school resource officer programs (police officers in schools) pop up in districts serving more heavily Democratic communities. Our findings are limited to an examination of the operational decisions that were made and therefore do not speak much to how those decisions were made or the extent to which partisan sentiments were expressed during the decision-making process. Future research could examine the content and language used in decision-making contexts to get at these issues. Despite these limitations, our results provide some good news for those who are concerned that partisan politics has made it harder to accomplish policy change in the education space and to recruit and retain educators in the PK-12 public school system, as they suggest there are many areas of day-to-day school policymaking that appear less driven by partisan positioning than the initial learning modality was in fall 2020. Many of these areas will remain more relevant to educational decision-makers during non-emergency times than modality.

There was one exception when it came to the generally non-significant relationships between a community's political makeup and operations—vote share was a significant (negative) predictor of family engagement. More specifically, districts with a greater Republican vote share were less likely to gather feedback from families to inform their initial reopening plan, to provide families guidance for learning at home, to recommend check-ins with families before the start of the school year, and to commit to sharing learning data with families. Why this is, we cannot be sure, but our analysis does rule out these districts' lower reliance on remote learning as the

reason. It could be that these districts served populations that were more determined to carry on with life as it was before the pandemic. Under that mindset, districts could be reacting to their families' preferences by not engaging with them on pandemic-related tasks like drafting a state-mandated reopening plan, emphasizing learning at home, or offering start-of-the-year check-ins. Whatever the reason, it is interesting that this operational characteristic stands out—although perhaps in a counterintuitive way—given the focus Republicans placed on parental rights in the 2021 Virginia Governor's race.

Public health—specifically, COVID-19 prevalence—was the second largest predictor of how much in-person learning districts offered at the start of the school year; however, this was not predictive at other points during the year or of other operations. This may suggest that COVID-19 statistics heading into the start of the school year influenced how families balanced COVID-19 precautions on one hand with in-person learning on the other. As the year progressed, decisions about in-person schooling may have become less connected to actual COVID-19 rates and more to perceptions of safety and risk that were already formed. However, it is important to note that both the public health and learning modality measures followed a dynamic process throughout the year. Our analysis does not model this complex relationship. It is possible that districts were indeed responsive to case rates in their local communities when deciding whether to reopen or remain open in-person, for example, during the winter of the 2020-21 year or even on a week-by-week basis. The type of longitudinal analysis required to capture this responsiveness is beyond the scope of the current paper but would be ripe for future research.

The racial and ethnic composition of a district, specifically the percentage of Black students served, was the only district characteristic that significantly predicted in-person learning at all three time points we examined. The magnitude of the negative association between a

district's percentage of Black students and in-person learning grew between September 2020 and February 2021 when it is the largest predictor. While the magnitude shrank in May 2021 to below the size of the September 2020 association, race remained a significant predictor and was the only significant predictor of in-person learning in Spring 2021. The coefficient on the percentage of Hispanic students, while never a significant predictor of the percentage of in-person learning, was always the same direction as the percentage of Black students. Neither were significant predictors of any of the other district operations.

It is not yet clear how much of these racial differences in in-person learning offerings reflected race-based differences in families' preferences for learning modality versus variation in the preferences of district leaders over how much in-person learning to make available to families depending on the racial composition of the community, regardless of those families' preferences. The answer based on the emerging literature appears to be a bit of both. First, several national surveys show Black and Hispanic parents expressing greater hesitancy about in-person learning and/or stronger preferences for a remote option than White parents, on average, through the 2020-21 school year (Collins, 2023; Haderlein et al., 2021; Rapaport et al. 2020). Several observers have hypothesized that the tragically higher rates of COVID-19 exposure and death among Black and Hispanic citizens than among White citizens could explain racial/ethnic differences in concern about the health risks associated with a return to in-person schooling.

Scholars have provided survey-based evidence on a variety of reasons behind families' learning modality preferences. Polikoff and colleages (2022) illustrate that the primary reasons parents reported hesitance about in-person learning in July 2021 were related to concerns about (a) health and safety risks as well as (b) beliefs about their child being happier or more successful at home versus at school. It is not clear how much of these concerns and/or beliefs

were connected to COVID-19 or other heightened concerns about safety and climate disproportionately affecting students of color and overall distrust in a system that has not always treated students equally on the basis of race. Camp and Zamarro (2021) more directly tackle the issue of ethnic differences in modality preferences and find that both the extent of local outbreaks in a respondent's community and their own personal perceived risk from COVID-19 play a sizeable role in explaining differences in families' use of in-person options, even controlling for other factors such as availability of in-person learning and partisanship. Similarly, using a mixed methods analysis of a December 2020 nationally representative survey, Calarco and colleagues (2021) find racial disparities in disease risk help explain race-based differences in parental choice of in-person instruction. However, they also reveal through an analysis of open-ended responses that parental availability for home-based learning support seemed to play a role. In short, because Black and Hispanic parents were less likely to be employed during the pandemic than White parents, they were more likely to report being available to provide support for remote instruction at home, "allowing them to center health risk in their decision-making." Another mixed methods analysis shows the importance that parental work and childcare needs played in shaping preferences for in-person learning (Cotto & Woulfin, 2021). Overall, parental preferences appeared to play a role in explaining racial differences in in-person learning availability.

That said, access to in-person learning also appeared to play a role, beyond parental preferences. Based on the Camp and Zamarro (2021) and Calarco et al. (2021) studies, it appears that lower levels of in-person learning options in communities serving larger concentrations of Black and Hispanic students were predictive of which types of learning modalities students experienced, even after controlling for parents' self-reported concerns about health risks, actual

COVID-19 rates, and parental availability for learning support. Kogan (2021) also points out that racial disparities in access to in-person instruction may have itself contributed to race-based differences in preferences for in-person learning. For example, perhaps school closures provided a signal from educational leaders to parents suggesting either that reopening was unsafe or that in-person learning was not particularly important (or both).

Regardless of the reasons, Black and Hispanic students had less access to in-person learning during the reopening year, raising serious concerns about persistent racial and ethnic inequality in educational outcomes. Academic performance declined more among students who spent less time learning in person (e.g., Fahle et al., 2023). In Virginia, the average White student had access to in-person learning for 39.2% of the year compared to 28.3% for Black and 27.2% for Hispanic students (Sachs et al., 2022). This likely contributed to the widening difference in test performance between White and Black and Hispanic Virginian students (Reynolds, Schueler & Miller, 2024), along with other unequal impacts of the pandemic beyond differences in learning modality. Therefore, regardless of the merits of reopening decisions, the pandemic made an already unacceptable educational situation worse.

Finally, our findings also contribute new evidence on the role of market pressures in district operations during the reopening year. Although not predictive of learning modality, the private school sector's market share was predictive of several other dimensions of district operations. The greater the market share in a district, the greater the emphasis that district placed on assessment use, expectations, and technology support in its public documents. This potentially suggests that market-based competition played a role in driving public school district operations in the reopening year even more so than it drove learning modality decisions. This is consistent with earlier findings that among students in the Virginia public school system, there

was a non-trivial increase in the share of students exiting for private schools from pre-pandemic times to the first post-pandemic onset year (Schueler & Miller, 2022).

Conclusion

Partisan polarization has permeated a greater number of policy domains in recent decades, even in education, where the local governance structure was designed to insulate policymaking from national partisan politics. However, much of the concerns over heightened polarization in the education space post-COVID have been based on evidence about school reopening modality in the first fall after the pandemic's onset. Although, like previous work, we show that the political makeup of a community played a significant role in shaping fall 2020 modality in the context of Virginia, the voting patterns of a given community were less predictive of modality over time and were not predictive of most other more day-to-day local operational decisions gleaned from reopening plans and other public updates districts released throughout the year. The results emphasize the role of politics, race, and markets in reopening decisions but also suggest that school operational decisions were not as politicized as the choice of learning modality. Our findings therefore provide some optimism for local educational leaders seeking to avoid highly polarized political dynamics, at least when it comes to issues that have not been nationalized by high-profile partisan elites.

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Table 1. Items Contributing to District Reopening Operations Characteristics Components, SY 2020-21

Family Engagement	**Wave**	**Load**
Feedback informs plans	Fall 2020	0.53
Guidance provided for learning at home	Fall 2020	0.75
Family check-ins recommended before start of year	Fall 2020	0.73
Learning data will be shared	Fall 2020	0.64
SEL Support	**Wave**	**Load**
Acknowledges SEL needs of students	2020-21	0.88
Provides SEL supports for students	Both	0.88
Schools expected to provide counselors/social workers	Fall 2020	0.55
Acknowledges SEL needs of staff	2020-21	0.92
Provides SEL supports for staff	2020-21	0.90
Partner organizations deliver SEL services	Fall 2020	0.43
Health Protocols	**Wave**	**Load**
Changed building practices for physical distancing	Fall 2020	0.96
Changed building sanitation protocols	Fall 2020	0.94
Provides guidelines for transportation health protocols	Fall 2020	0.83
Provides guidelines for food service health protocols	Fall 2020	0.83
Provides guidelines for behavioral norms for health	Fall 2020	0.93
Supplies PPE for all employees	Fall 2020	0.63
Requires face masks in instructional spaces	Fall 2020	0.78
Plan for determining future rolling school closures	Fall 2020	0.60
Updated sick leave policy for COVID-19	Fall 2020	0.70
Guidance provided for health	Fall 2020	0.54
Health data will be shared	Fall 2020	0.63
Provides staff training for health best practices	Fall 2020	0.67

Assessment Use	**Wave**	**Load**
Plan to assess student learning in the fall	Both	0.69
Plan to monitor academic progress through the year	Both	0.91
Specified assessment to be used for monitoring	2020-21	0.85
Expectations	**Wave**	**Load**
Reiterated schools required to take attendance	Fall 2020	0.70
Defines attendance in remote setting	2020-21	0.69
Schools required to provide grades	Fall 2020	0.80
Requires teacher feedback on student work	Fall 2020	0.79
Names required minimum instructional minutes	Fall 2020	0.59
Teacher Professional Development	**Wave**	**Load**
Offered COVID-specific instructional PD	Fall 2020	0.70
Provides coaching to teachers in remote setting	Fall 2020	0.84
School day time set for PD, planning or collaboration	Fall 2020	0.69
Tech Support	**Wave**	**Load**
Provides home-based internet for all students in need	Both	0.77
Majority of grades provided devices for all students in need	2020-21	0.77
Provides tech support for at-home learning	2020-21	0.57
Learning Needs Support	**Wave**	**Load**
Plans to offer summer school or ELT	Both	0.65
Plans to provide tutoring	Both	0.58
Majority of grades provided synchronous instruction in remote mode	Both	0.45
Provides interventions based on learning needs diagnostic	Fall 2020	0.64

Note: Each row provides a summary of the item and the reopening plans that contribute to the coding of the item (e.g., Fall 2020 Reopening Plan, 2020-21 Amendments to Reopening Plans, Both), as well as loadings for each item.

Table 2. Reopening Characteristics for School District Communities, SY 2020-21

Characteristic	Mean	SD	Min	Max
N Days in Session	177.35	5.11	161.00	186.00
% Days In-Person, Whole Year	41.39	20.63	0.00	95.88
% Days In-Person, Sept. 2021	22.98	28.03	0.00	100.00
% Days In-Person, Feb. 2022	39.32	27.82	0.00	100.00
% Days In-Person, May 2022	67.66	20.13	0.00	100.00
% Days Fully Remote Modality, Whole Year	31.79	26.98	0.00	100.00
% Days Hybrid Modality, Whole Year	61.69	28.01	0.00	100.00
% Days Fully In-Person Modality, Whole Year	6.52	16.51	0.00	95.88
N Modality Changes, Whole Year	3.10	2.46	0.00	14.00
N Attendance Rotation Changes, Whole Year	3.95	2.85	0.00	16.00

Note: N = 132 for all characteristics.

Table 3. Characteristics of School District Communities

Characteristic	Mean	SD	Min	Max
Public School District Characteristics				
Enrollment (1000s)	9.78	21.32	0.21	187.83
% American Indian or Alaskan Native	0.30	0.56	0.00	6.00
% Asian	1.85	3.09	0.00	22.13
% Black	22.06	21.57	0.00	90.23
% Hispanic	9.51	10.69	0.33	65.54
% Native Hawaiian or Pacific Islander	0.11	0.13	0.00	0.94
% White	61.03	24.70	2.74	99.02
% Two or More Races (non-Hispanic)	5.15	2.69	0.11	12.65
% Economically Disadvantaged	47.29	14.29	0.00	80.58
Per Pupil Expenditures (1000s)	12.22	2.13	9.16	20.65
Community Demographic Characteristics				
% in Private Schools (2019-20)	5.56	6.65	0.00	33.75
Public Health Characteristics				
COVID-19 Hospitalizations/100k Aug 2020	88.91	87.31	0.00	593.56
COVID-19 Hospitalizations/100k Jan 2021	246.93	136.14	0.00	999.69
COVID-19 Hospitalizations/100k April 2021	353.12	177.62	45.41	1343.33
Republican Vote Share				
2016 Presidential Election	55.22	16.35	10.53	81.97

Notes. N = 132 for all characteristics. All characteristics measured in SY 2018-19 unless otherwise noted.

Table 4. Unstandardized and Standardized Predictors of Whole Year District Learning Modality Characteristics, SY 2020-21

	% Days In Person		% Days Fully In-Person Modality		% Days Hybrid Modality		% Days Fully Remote Modality		N Modality Changes		N Attendance Rotation Changes	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Republican Vote Share (2016)	0.51**	8.31**	0.31+	5.12+	0.63*	10.37*	-0.95***	-15.50***	-0.02	-0.33	-0.00	-0.05
	(0.16)	(2.62)	(0.18)	(2.98)	(0.25)	(4.10)	(0.20)	(3.34)	(0.03)	(0.44)	(0.03)	(0.52)
COVID-19 Hospitalizations/100k [a]	-2.30	-2.38	0.53	0.55	-3.59	-3.73	3.07	3.18	0.06	0.06	-0.04	-0.05
	(1.59)	(1.65)	(1.81)	(1.87)	(2.49)	(2.58)	(2.03)	(2.10)	(0.27)	(0.28)	(0.32)	(0.33)
% Black	-0.28**	-5.97**	0.05	1.08	-0.26+	-5.60+	0.21+	4.52+	-0.01	-0.27	-0.01	-0.30
	(0.10)	(2.13)	(0.11)	(2.42)	(0.15)	(3.33)	(0.13)	(2.71)	(0.02)	(0.36)	(0.02)	(0.43)
% Hispanic [a]	-1.00	-0.80	2.47	1.96	1.11	0.88	-3.57	-2.84	-0.55	-0.44	-0.05	-0.04
	(2.48)	(1.97)	(2.82)	(2.24)	(3.89)	(3.09)	(3.16)	(2.51)	(0.42)	(0.33)	(0.50)	(0.39)
% Economically Disadvantaged	0.11	1.62	-0.16	-2.35	0.12	1.77	0.04	0.58	-0.01	-0.19	-0.01	-0.11
	(0.11)	(1.51)	(0.12)	(1.72)	(0.17)	(2.37)	(0.13)	(1.93)	(0.02)	(0.26)	(0.02)	(0.30)
Enrollment (1000s) [a]	0.87	0.84	1.12	1.08	-2.66	-2.57	1.54	1.49	0.58*	0.56*	0.32	0.31
	(1.66)	(1.60)	(1.88)	(1.81)	(2.59)	(2.50)	(2.11)	(2.04)	(0.28)	(0.27)	(0.33)	(0.32)
% Private Schools [a]	-0.67	-0.70	-0.58	-0.61	2.23	2.35	-1.66	-1.74	-0.26	-0.27	-0.03	-0.04
	(1.34)	(1.41)	(1.52)	(1.60)	(2.09)	(2.20)	(1.70)	(1.79)	(0.23)	(0.24)	(0.27)	(0.28)
Per Pupil Expenditures (2018) [a]	-13.36	-2.07	2.27	0.35	-20.55	-3.18	18.28	2.83	1.95	0.30	1.42	0.22
	(10.38)	(1.60)	(11.77)	(1.82)	(16.22)	(2.51)	(13.20)	(2.04)	(1.75)	(0.27)	(2.08)	(0.32)
Constant	150.42	41.39***	-33.69	6.52***	233.59	61.69***	-99.90	31.79***	-12.96	3.10***	-8.76	3.95***
	(104.50)	(1.26)	(118.48)	(1.43)	(163.38)	(1.97)	(132.97)	(1.60)	(17.61)	(0.21)	(20.91)	(0.25)
Standardized predictors		x		x		x		x		x		x
N	132		132		132		132		132		132	
R-squared	0.54		0.07		0.39		0.56		0.07		0.03	

Notes: + p < .10, * p < .05, ** p < .01, *** p < .001. Standard errors in parentheses. COVID-19 hospitalization measure was as of August 15, 2020.

[a] The variable was transformed using the natural log (x+1) to improve normality.

Table 5. Unstandardized and Standardized Predictors of Percentage of Days In-Person Learning at Specific Timepoints Throughout SY 2020-21

	September 2020		**February 2021**		**May 2021**		**Whole Year**	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Republican Vote Share (2016)	0.58*	9.42*	0.57*	9.25*	0.31	5.07	0.51**	8.31**
	(0.25)	(4.01)	(0.22)	(3.68)	(0.20)	(3.23)	(0.16)	(2.62)
COVID-19 Hospitalizations/100k [a]	-6.19*	-6.42*	-1.79	-1.19	0.01	0.01	-2.30	-2.38
	(2.44)	(2.53)	(3.02)	(2.01)	(4.05)	(1.88)	(1.59)	(1.65)
% Black	-0.29+	-6.23+	-0.44**	-9.48**	-0.22+	-4.75+	-0.28**	-5.97**
	(0.15)	(3.26)	(0.13)	(2.88)	(0.12)	(2.55)	(0.10)	(2.13)
% Hispanic [a]	-0.89	-0.70	-3.34	-2.66	-1.48	-1.17	-1.00	-0.80
	(3.80)	(3.02)	(3.14)	(2.50)	(2.76)	(2.20)	(2.48)	(1.97)
% Economically Disadvantaged	0.44**	6.23**	0.14	1.99	-0.08	-1.12	0.11	1.62
	(0.16)	(2.32)	(0.15)	(2.17)	(0.14)	(2.00)	(0.11)	(1.51)
Enrollment (1000s)	0.69	0.67	-0.80	-0.77	0.71	0.69	0.87	0.84
	(2.54)	(2.45)	(2.33)	(2.25)	(2.04)	(1.96)	(1.66)	(1.60)
% Private Schools [a]	-1.34	-1.41	0.52	0.54	-1.79	-1.89	-0.67	-0.70
	(2.05)	(2.15)	(1.88)	(1.97)	(1.64)	(1.73)	(1.34)	(1.41)
Per Pupil Expenditures (2018) [a]	3.19	0.49	-24.43	-3.78	-4.57	-0.71	-13.36	-2.07
	(15.87)	(2.45)	(15.02)	(2.32)	(12.81)	(1.98)	(10.38)	(1.60)
Constant	-25.34	22.98***	257.77+	39.32***	106.23	67.66***	150.42	41.39***
	(159.82)	(1.93)	(154.44)	(1.77)	(132.84)	(1.55)	(104.50)	(1.26)
Standardized predictors		x		x		x		x
N	132		132		132		132	
R-squared	0.41		0.50		0.27		0.54	

Notes: + p < .10, * p < .05, ** p < .01, *** p < .001. Standard errors in parentheses. COVID-19 hospitalization rates were as of the 15th of the month preceding the listed outcome (e.g., for the February outcome, we use COVID-19 rates as of January 15, 2021) and as of August 15, 2020 for the whole year model.

[a] The variable was transformed using the natural log (x+1) to improve normality.

Table 6. Bivariate Correlations Between District Baseline Characteristics and District Reopening Operations Characteristics

	Family Engagement	**SEL Support**	**Assessment Use**	**Expectations**	**Teacher PD**	**Health Protocols**	**Technology Support**	**Learning Needs Support**
Republican Vote Share (2016)	-0.31***	-0.05	0.02	-0.13	-0.19*	0.29***	-0.27**	-0.09
COVID-19 Hospitalizations/100k [a]	0.19*	0.05	-0.10	-0.05	0.15+	-0.05	0.17*	-0.02
% Black	0.23**	-0.02	-0.07	0.06	0.09	-0.25**	0.18*	-0.02
% Hispanic [a]	0.12	0.03	-0.10	-0.03	0.11	-0.07	0.14	0.14
% Economically Disadvantaged	0.01	-0.10	-0.16+	-0.07	-0.19*	-0.06	0.05	-0.16+
Enrollment (1000s) [a]	0.06	0.09	0.00	0.13	0.14	-0.13	0.11	0.20*
% Private Schools [a]	0.12	0.14	0.15+	0.22*	0.04	-0.15+	0.32***	0.14
Per Pupil Expenditures (2018) [a]	0.15+	0.08	0.02	0.05	0.02	-0.17+	0.11	0.10

Notes: + p < .10, * p < .05, ** p < .01, *** p < .001. Standard errors in parentheses.

[a] The variable was transformed using the natural log (x+1) to improve normality.

Table 7. Unstandardized and Standardized Predictors of District Reopening Operations Characteristics, SY 2020-21

	Family Engagement		**SEL Support**		**Assessment Use**		**Expectations**		**Teacher Professional Development**		**Health Protocols**		**Technology Support**		**Learning Needs Support**	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Rep. Vote Share (2016)	-0.02+	-0.31+	0.00	0.04	-0.00	-0.03	-0.01	-0.18	-0.01	-0.22	0.01	0.19	-0.01	-0.19	0.01	0.15
	(0.01)	(0.18)	(0.01)	(0.18)	(0.01)	(0.18)	(0.01)	(0.18)	(0.01)	(0.18)	(0.01)	(0.18)	(0.01)	(0.17)	(0.01)	(0.18)
COVID-19 Hosp./100k [a]	0.13	0.13	0.11	0.11	-0.01	-0.01	-0.05	-0.05	0.17	0.17	0.07	0.08	0.08	0.08	-0.06	-0.06
	(0.11)	(0.11)	(0.11)	(0.12)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
% Black	0.00	0.01	-0.00	-0.04	-0.00	-0.03	-0.00	-0.03	-0.00	-0.00	-0.01	-0.13	-0.00	-0.00	0.00	0.09
	(0.01)	(0.14)	(0.01)	(0.15)	(0.01)	(0.15)	(0.01)	(0.15)	(0.01)	(0.14)	(0.01)	(0.14)	(0.01)	(0.14)	(0.01)	(0.15)
% Hispanic [a]	-0.12	-0.10	-0.12	-0.10	-0.22	-0.17	-0.27	-0.21	-0.14	-0.11	0.09	0.07	-0.09	-0.07	0.13	0.10
	(0.17)	(0.13)	(0.17)	(0.14)	(0.17)	(0.14)	(0.17)	(0.13)	(0.17)	(0.13)	(0.17)	(0.13)	(0.16)	(0.13)	(0.17)	(0.13)
% Econ. Dis-advantaged	-0.00	-0.05	-0.01	-0.10	-0.01	-0.16	-0.00	-0.03	-0.02*	-0.24*	-0.00	-0.05	0.00	0.04	-0.01	-0.12
	(0.01)	(0.10)	(0.01)	(0.11)	(0.01)	(0.10)	(0.01)	(0.10)	(0.01)	(0.10)	(0.01)	(0.10)	(0.01)	(0.10)	(0.01)	(0.10)
Enrollment (1000s) [a]	-0.04	-0.04	0.08	0.08	-0.02	-0.02	0.12	0.12	0.03	0.03	-0.11	-0.11	-0.01	-0.00	0.18	0.17
	(0.11)	(0.11)	(0.12)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
% Private Schools [a]	0.01	0.02	0.11	0.12	0.18+	0.19+	0.18+	0.19+	-0.06	-0.06	-0.06	-0.06	0.25**	0.27**	0.08	0.08
	(0.09)	(0.09)	(0.09)	(0.10)	(0.09)	(0.10)	(0.09)	(0.10)	(0.09)	(0.10)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.10)
Per Pupil Exp. (2018) [a]	0.03	0.00	0.77	0.12	0.11	0.02	-0.10	-0.02	-0.25	-0.04	-0.32	-0.05	-0.16	-0.02	1.00	0.15
	(0.70)	(0.11)	(0.72)	(0.11)	(0.71)	(0.11)	(0.71)	(0.11)	(0.70)	(0.11)	(0.70)	(0.11)	(0.69)	(0.11)	(0.71)	(0.11)
Constant	0.70	-0.00	-7.56	-0.00	-0.11	-0.00	1.98	0.00	3.53	-0.00	2.43	0.00	1.47	-0.00	-9.99	-0.00
	(7.03)	(0.08)	(7.28)	(0.09)	(7.17)	(0.09)	(7.11)	(0.09)	(7.05)	(0.09)	(7.01)	(0.08)	(6.90)	(0.08)	(7.14)	(0.09)
Stndzd. Pred.		x		x		x		x		x		x		x		x
N	132		132		132		132		132		132		132		132	
R-squared	0.11		0.04		0.07		0.09		0.10		0.11		0.14		0.08	

Notes: + p < .10, * p < .05, ** p < .01, *** p < .001. Standard errors in parentheses.

[a] The variable was transformed using the natural log (x+1) to improve normality.

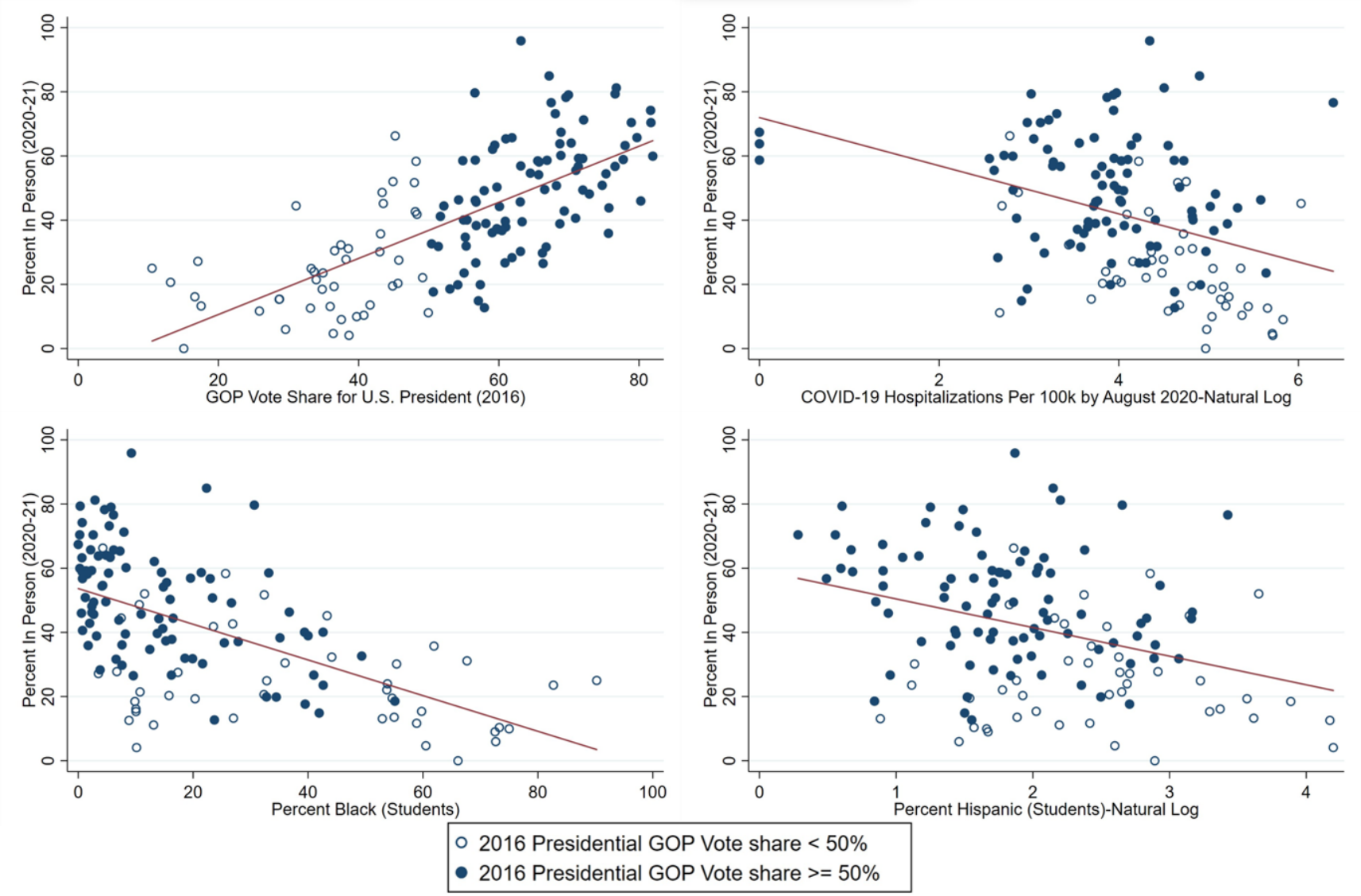

Figure 1. Unconditional bivariate relationships between percentage of the 2020-21 year spent learning in person and measures of partisanship, health, and race/ethnicity.

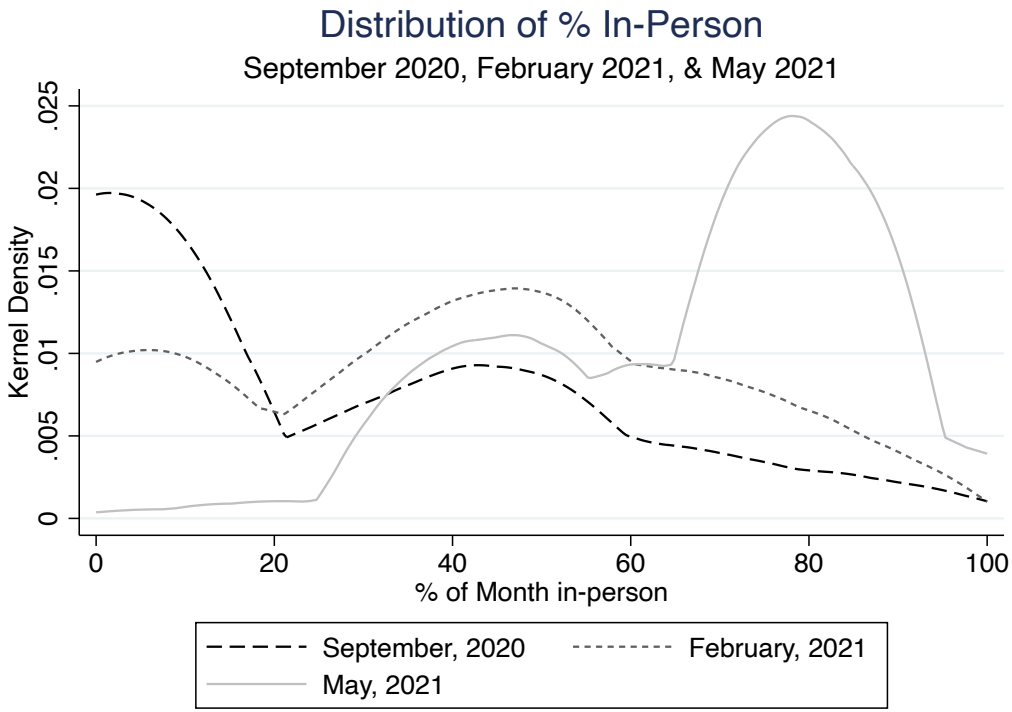

Figure 2. Kernel density plot of percentage in person at three time points during 2020-21.

Appendix A.

Table A1. Wave 1 Codes by Category: Fall 2020-21 Reopening Plans

#	Code Description	#	Code Description
1. Clear, inclusive, and regular communication			
1.1	District communicates expectation that student learning data will be shared with families	1.2	District communicates expectation that health and safety data will be shared with families
1.3	District solicits and uses feedback to inform plans for next school year (2020-2021)	1.4	District offers guidance or training to parents in how to help students learn at home
1.5	District offers guidance or training to parents in effective health and safety practices	1.6	District requires teacher-family check-ins when engaged in remote learning
2. Effective resource allocation			
2.1	Plan explains changes to district or school staff roles to support student learning	2.2	District plan includes partnership(s) with outside organizations to deliver services
3. Clear fall reopening plan			
3.1	Actual learning mode on first day of school	3.2	Actual Elementary school format per plan (assuming health and safety allow) on first day of school
3.3	Actual Middle school format per plan (assuming health and safety allow) on first day of school	3.4	Actual High school format per plan (assuming health and safety allow) on first day of school
3.5	2020-21 Calendar Changes	3.6	First day of school (2019-2020)
3.7	Last day of school (2019-2020)	3.8	First day of school (2020-2021)
3.9	Last day of school (2020-2021)	3.10	District provides detail for fully in-person learning scenario
3.11	District provides detail for fully remote learning scenario	3.12	District provides detail for hybrid learning scenario
3.13	District provides full-time remote "home choice" option	3.14	District prioritizes serving elementary students (excludes Pre-K)
3.15	District prioritizes serving vulnerable populations (e.g., EL, SWD, other at-risk students)	3.16	District mentions racial equity as a priority and/or considers racial equity in which students to prioritize for services and in-person instruction
3.17	Type of schedule modification for hybrid learning	3.18	Plan names required minimum number of instructional minutes
3.19	Minimum number of instructional minutes required per week	3.20	District has a plan to provide social, emotional, and mental health services
3.21	District expects all schools to provide access to counselors or social workers	3.22	District requires schools to take attendance
3.23	District requires schools to provide student grades	3.24	District modifies grading format
3.25	District has a plan to monitor students' academic progress throughout the year	3.26	District recommends or requires a homeroom or an advisory system across schools

(continued)

Table A1. Wave 1 Codes by Category: Fall 2020-21 Reopening Plans (continued)

#	Code Description	#	Code Description
4. Structured and meaningful 2020-21 learning plan			
4.1	District sets expectation that remote curriculum be provided for core courses	4.2	District will provide remote curriculum for all grade levels
4.3	District will provide remote instruction for all grade levels	4.4	Type of remote instruction offered to students
4.5	District expects teachers to provide feedback on student work for students engaged in remote learning	4.6	District has a plan to provide interventions or increased supports based on student learning loss diagnostic
4.7	District plans to provide tutoring to students	4.8	District has a plan for supporting high school students with college and career preparation (test prep, counseling, etc.)
4.9	District requires teacher/student check-ins when engaged in remote learning	4.10	District expects schools to diagnose entering student learning loss
5. Educational services for vulnerable populations		5.1	District has a plan to provide specific support to students with language barriers
5.2	District has a plan to provide specific support to students experiencing homelessness/transitional students	5.3	District has a plan to provide specific support to students with disabilities
6. Support to Staff		6.1	District offered COVID-19 specific instructional professional development
6.2	District explicitly states that it has increased time dedicated to teacher PD and/or collaboration	6.3	District provides staff training for health and safety best practices
6.4	District has plan to provide coaching to teachers during the year in remote learning setting	6.5	District sets aside time during the school day for professional learning, planning, and/or collaboration
7. Health and safety measures in place		7.1	District communicates changes to building practices for all schools to ensure physical distancing
7.2	District communicates changes to building health sanitation and protocols	7.3	For in person learning, district communicates guidelines to transportation forms, routes and sanitization practices
7.4	For in person learning, district communicates guidelines to food services to prevent cross-contamination	7.5	For in person learning, district communicates guidelines in expectations for behavioral norms to prevent cross-contamination
7.6	District supplies PPE for all employees	7.7	District requires face masks
7.8	District has a plan or policy for determining future rolling closures if confirmed infection(s) of staff or students	7.9	District's sick leave policy is updated to reflect COVID-19 preferences
8. Equitable access to education is ensured for all students		8.1	Plan commits to provide devices for all students in need
8.2	Plan commits to provide hotspot/wifi access for all students in need	8.3	District recommends or requires home visits or virtual family/student check ins before the start of year

All codes were included in the collapsed codes for the analysis.

Table A2. Wave 2 Codes by Category: Through Year Reopening Operations

#	Code Description	#	Code Description
1. Clear reopening plan			
1.1	District provides full-time remote "home choice" option	1.2	Date by which families needed to make a decision
1.3	For what time period were families selecting from among the available options?	1.4*	Staffing of home choice option
1.5*	District prioritizes serving vulnerable populations for in-person instruction in school buildings	1.5.1	Type of vulnerable populations prioritized for in-person instruction
1.7	District defines "attendance" for the remote setting	1.7.1*	How does the district define attendance in the remote setting?
1.8*	District modified its grading format from pre-COVID year(s)	1.8.1	If the District changed its grading format from previous year(s), what changes were made?
1.9	District changed its grade retention policy from previous year(s)	1.9.1	If the District changed its grade retention policy, what changes were made?
1.10*	District has a plan to assess student learning in the fall (via formative or diagnostic assessment)	1.10.1	How did the district assess learning in the fall - K-2?
1.10.2	How did the district assess learning in the fall - 3rd - 5th grade?	1.10.3	How did the district assess learning in the fall - middle school?
1.10.4	How did the district assess learning in the fall - high school?	1.10.5	Will the fall assessment(s) be administered in-person or online/virtually?
1.11*	District has a plan to monitor students' academic progress throughout the year (via formative or diagnostic assessment)	1.11.1*	Did the district specify which assessments would be used to monitor students' academic progress throughout the year?
1.11.2	Which assessments were used to monitor students' academic progress throughout the year for K-2 students?	1.11.3	Which assessments were used to monitor students' academic progress throughout the year for 3rd-5th graders?
1.11.4	Which assessments were used to monitor students' academic progress throughout the year for middle school (6th-8th grade) students?	1.11.5	Which assessments were used to monitor students' academic progress throughout the year for high school (9th-12th grade) students?
1.12*	District plans to provide tutoring	1.12.1	If yes to 1.12, specify for whom, how they were identified, and what programming was offered to these students
1.13*	District plans to offer summer school instruction or another form of extended learning time?	1.13.1	If yes to 1.13, specify for whom, how they were identified, and what summer programming or extended learning time was offered to these students
1.14*	District acknowledges the social, emotional, and mental health needs of students?	1.14.1*	District discusses services or supports to address social, emotional, and mental health needs of students

(Continued)

Table A2. Wave 2 Codes by Category: Through Year Reopening Operations (continued)

#	Code Description	#	Code Description
1.15	If "Yes" to 1.14.1, identify new services provided to students	1.15.1*	District acknowledges the social, emotional, and mental health needs of staff?
1.15.2*	District discusses services or supports to address social, emotional, and mental health needs of staff	1.15.3	If "Yes, COVID" to 1.15.2, identify new services provided to staff
2. Structured and meaningful 2020-21 learning plan		2.1*	In what format(s) will the district provide remote curriculum?
2.2	District will provide remote curricula for all students	2.2.1	If district DOES NOT provide remote curricula for all students, for which students is remote curriculum provided?
2.3.1 to 2.3.14*	Type of remote instruction offered to *{pre-kindergarten, kindergarten, … 11th grade, 12th grade}* students	2.4*	Were any teachers assigned to teach multiple modes?
2.4.1	IF "Yes" to 2.4: Did district expect teachers to simultaneously/concurrently teach students in-person and online?	2.4.2	If yes to 2.4.1, then for which grades or student groups
3. Equitable access to education is ensured for all students		3.1.1 to 3.11.14*	Plan commits to provide devices for *{pre-kindergarten, kindergarten, … 11th grade, 12th grade}* students in need
3.2*	Plan commits to provide internet connectivity for students in need	3.2.1*	District commits to providing tech support for at-home learning throughout the school year

Codes with an asterisk were included in the collapsed codes for the analysis.

Table A3. Standardized Predictors of District Reopening Operations Characteristics, Controlling for Percentage of Year In-Person, SY 2020-21 and Proxies for District Capacity

	Family Engagement		SEL Support		Assessment Use		Expectations		Teacher Professional Development		Health Protocols		Technology Support		Learning Needs Support	
Republican Vote Share (2016)	-0.35+	-0.34+	-0.03	0.10	-0.02	0.02	-0.14	-0.05	-0.15	-0.18	0.10	0.30+	-0.20	-0.22	0.06	0.18
	(0.18)	(0.17)	(0.19)	(0.17)	(0.19)	(0.18)	(0.19)	(0.17)	(0.18)	(0.18)	(0.18)	(0.17)	(0.18)	(0.17)	(0.18)	(0.18)
COVID-19 Hosp./100k a	0.14	0.18	0.13	0.14	-0.01	-0.03	-0.06	-0.06	0.15	0.12	0.10	0.08	0.09	0.16	-0.04	-0.01
	(0.11)	(0.11)	(0.12)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
% Black	0.04	0.01	0.02	0.00	-0.04	0.00	-0.05	0.05	-0.06	0.05	-0.07	-0.06	0.00	-0.04	0.15	0.10
	(0.15)	(0.14)	(0.15)	(0.14)	(0.15)	(0.15)	(0.15)	(0.14)	(0.15)	(0.15)	(0.15)	(0.14)	(0.15)	(0.14)	(0.15)	(0.14)
% Hispanic [a]	-0.09	-0.10	-0.09	-0.10	-0.17	-0.15	-0.22	-0.20	-0.12	-0.06	0.08	0.09	-0.07	-0.13	0.11	0.08
	(0.13)	(0.13)	(0.14)	(0.13)	(0.14)	(0.14)	(0.13)	(0.13)	(0.13)	(0.14)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
% Econ. Disadvantaged	-0.06	-0.09	-0.11	-0.17+	-0.16	-0.20+	-0.02	-0.10	-0.23*	-0.26*	-0.06	-0.11	0.04	-0.01	-0.14	-0.18+
	(0.10)	(0.10)	(0.11)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)
Enrollment (1000s) a	-0.05	-0.30	0.07	-0.03	-0.02	-0.09	0.12	0.26	0.03	-0.29	-0.12	-0.09	-0.01	0.34	0.16	0.19
	(0.11)	(0.27)	(0.11)	(0.27)	(0.11)	(0.28)	(0.11)	(0.27)	(0.11)	(0.28)	(0.11)	(0.27)	(0.11)	(0.26)	(0.11)	(0.27)
% Private Schools a	0.02	-0.01	0.13	0.08	0.19+	0.18+	0.18+	0.16+	-0.07	-0.03	-0.05	-0.08	0.27**	0.18*	0.09	0.03
	(0.09)	(0.09)	(0.10)	(0.09)	(0.10)	(0.10)	(0.10)	(0.09)	(0.09)	(0.10)	(0.09)	(0.09)	(0.09)	(0.09)	(0.10)	(0.10)
Per Pupil Exp. (2018) a	0.01	0.05	0.14	0.15	0.01	0.04	-0.02	-0.03	-0.06	-0.05	-0.03	-0.06	-0.02	0.06	0.18	0.18
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.10)	(0.11)	(0.11)
Constant	-0.20	-0.91*	-0.40	-0.98**	0.04	-0.34	0.17	-0.38	0.39	-0.32	-0.44+	-0.56	-0.05	-0.31	-0.45+	-0.72+
	(0.27)	(0.37)	(0.27)	(0.37)	(0.27)	(0.39)	(0.27)	(0.37)	(0.26)	(0.39)	(0.26)	(0.37)	(0.26)	(0.36)	(0.27)	(0.38)
Control for % 2020-21 In Person	x		x		x		x		x		x		x		x	
Controls for District Capacity Proxies		x		x		x		x		x		x		x		x
N	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132
R-squared	0.11	0.21	0.06	0.20	0.07	0.14	0.09	0.20	0.12	0.14	0.13	0.20	0.14	0.26	0.10	0.17

Note: *** p < .001, ** p < .01, * p < .05, + p < .10. [a] The variable was transformed using the natural log (x+1) to improve normality. District capacity proxies include number of administrators, student:administrator ratio, number of words in operations documents, and total number of reopening operations documents.