



School reopening decisions during the COVID-19 pandemic: What can we learn from the emerging literature?

Jeremy Singer
Wayne State University

After near-universal school closures in the United States at the start of the pandemic, lawmakers and educational leaders made plans for when and how to reopen schools for the 2020-21 school year. Educational researchers quickly assessed how a range of public health, political, and demographic factors were associated with school reopening decisions and parent preferences for in-person and remote learning. I review this body of literature, to highlight what we can learn from its findings, limitations, and influence on public discourse. Studies consistently highlighted the influence of partisanship, teachers' unions, and demographics, with mixed findings on COVID-19 rates. The literature offers useful insight and requires more evidence, and it highlights benefits and limitations to rapid research with large-scale quantitative data.

VERSION: August 2022

Suggested citation: Singer, Jeremy. (2022). School reopening decisions during the COVID-19 pandemic: What can we learn from the emerging literature?. (EdWorkingPaper: 22-617). Retrieved from Annenberg Institute at Brown University: <https://doi.org/10.26300/z9w0-9q22>

School reopening decisions during the COVID-19 pandemic: What can we learn from the emerging literature?

Jeremy Singer
Wayne State University

Abstract

After near-universal school closures in the United States at the start of the pandemic, lawmakers and educational leaders made plans for when and how to reopen schools for the 2020-21 school year. Educational researchers quickly assessed how a range of public health, political, and demographic factors were associated with school reopening decisions and parent preferences for in-person and remote learning. I review this body of literature, to highlight what we can learn from its findings, limitations, and influence on public discourse. Studies consistently highlighted the influence of partisanship, teachers' unions, and demographics, with mixed findings on COVID-19 rates. The literature offers useful insight and requires more evidence, and it highlights benefits and limitations to rapid research with large-scale quantitative data.

School reopening decisions during the COVID-19 pandemic: What can we learn from the emerging literature?

After near-universal school closures in the United States at the start of the COVID-19 pandemic, lawmakers and educational leaders made plans for when and how to reopen schools for 2020-21 (Grossman et al., 2021). As school reopening plans and decisions became available in aggregated data sets, researchers moved quickly to assess how a range of public health, political, and demographic factors were associated with school reopening. In this article, I review this emergent body of literature.

There are two important insights from this research. First, we can learn from the findings themselves: the way schools and districts reopened during the COVID-19 pandemic has lessons about how our school system leaders make decisions in times of crisis and how those decisions are shaped by different actors, interests, and contextual factors. Second, we can learn from the limitations in this initial research. In particular, these studies identify factors associated with reopening; but they do not capture how these factors may have been interrelated (Harris & Oliver, 2021), nor do they provide evidence of how these factors influenced the decision-making process. These limitations present directions for further research on school reopening during the pandemic—especially qualitative research—to inform educational decision-making during times of crisis. They also offer some cautionary wisdom about rapidly responding to new research questions in education with large-scale quantitative studies.

Literature Review

The literature on COVID-19 and school reopening address two distinct but related questions. The first is, “What factors are associated with the decisions that districts or schools made to reopening in-person instruction in the 2020-21 school year?” Answers to this question

provide direct evidence on reopening during the pandemic. The second question is, “What factors are associated with the racial and socioeconomic divergence in preferences for and participation in in-person instruction?” Studies addressing this question do not directly explain school reopening in 2020-21, but they provide important context and insight on the issue of reopening. Table 1 lists the existing literature for these questions (some studies address both), and highlights the major relevant factors that each study examines.

Factors Associated with Reopening

Partisanship

Partisanship stands out as a major predictor of school reopening, though only one existing study provides direct evidence of how the partisan affiliation of governing elites and constituents translated into different reopening decisions. Quantitative studies consistently found that districts with more Democratic support—often measured by the Trump or Clinton vote share in the 2016 election—were less likely to offer in-person instruction (Grossmann et al., 2021; Harris & Oliver, 2021; Hartney & Finger, 2021; Houston & Steinberg, 2022; Marianno et al., 2022). Importantly, Houston & Steinberg (2022) find the magnitude of partisan influence decreased over time.

Kretchmar and Brewer (2022), in their study of reopening in Wisconsin and Georgia districts, offer insight into how partisan differences specifically shaped the reopening process. First, they show there was a politicized response to public health guidance, with districts in more Democratic areas adhering to public health guidance more closely. In Georgia for example, a Republican district phased in reopening at the start of the year while a Democratic district remained virtual through March 2021 based on COVID-19 case rate thresholds it set for reopening. Second, they show that decision makers and the general public accepted the risks of COVID-19 transmission in and through schools differently, with more-Republican districts expressing less

concern. These perspectives were also racially divergent, given that more-Democratic areas also had larger non-white populations. Third, they show that there were divergent attitudes about teacher health and safety, with those in Republican districts expressing less sympathy for teacher concerns about contracting COVID-19. Houston and Steinberg (2022) offer some conflicting evidence on this last point, since they find that counties with greater pre-pandemic public support for teacher salary increases had more reopened schools.

Teachers' Unions

Districts with stronger teachers unions—measured differently across studies based on district size, the existence of a collective bargaining agreement (CBA), or the length of the CBA—were also less likely to offer in-person instruction (DeAngelis & Makridis, 2021; Grossmann et al., 2021; Harris & Oliver, 2021; Hartney & Finger, 2021; Houston & Steinberg, 2022). Marianno et al. (2022) found that some measures of unions' "second face of power" (e.g., strength of existing bargaining and negotiating positions, measured by district size CBA length) significantly predicted reopening decisions in the fall and number of weeks open for in-person or hybrid. They also find that measures of their "first face of power" (e.g., new efforts to organize influence, through communication with the public or legal action against a district) were not significant predictors of reopening patterns. Houston and Steinberg (2022) find that the magnitude of the influence of teacher union strength decreased over time.

District Demographics

Along with political factors, community demographics appear relevant. Most studies use these as controls and focus on the coefficients for political factors, and thus do not report the magnitude and significance of demographic associations with reopening decisions. Studies that report these coefficients mostly show that district demographics are statistically significant

predictors of reopening decisions (Diemer & Park, 2022; Grossmann et al., 2021; Haderlein et al., 2021; Harris & Oliver, 2021; Hartney & Finger, 2021; Marianno et al., 2022). For example, Harris and Oliver (2021) show that the share of Black, Hispanic, and low-income families each remain significant predictors of districts remaining remote, both in fall 2020 and spring 2021. Several studies also highlight “urbanicity” as a significant predictor of reopening status (Cohodes & Pitts, 2021; Diemer & Park, 2022; Haderlein et al., 2021). Houston and Steinberg (2022), however, find that median income and racial composition at the county level were not significant predictors.

COVID-19

Findings on the impact of COVID-19 rates (e.g., case rates, hospitalizations, deaths) have been mixed, but the way that researchers have operationalized the impact of COVID-19 may mask its effect. Harris & Oliver (2021) show they significantly predict remote learning for fall 2020 but not in spring 2020. Grossmann et al. (2021) find a weak association. Marianno et al. (2022) find no significant association between hospitalization rates and school opening in 250 large districts. Hartney & Finger (2020) find COVID is only a significant predictor when measuring the rates in September 2020 (i.e., preceding reopenings); and DeAngelis & Makridis (2021, 2022) find that it is insignificant.

Houston and Steinberg (2022), however, show that the significance of COVID-19 rates is sensitive to model specification. Applying state fixed effects and examining reopening and COVID-19 rates at the county level, they show that “within a given state, counties with higher Covid case rates had lower in-person instruction rates” (p. 18). Houston & Steinberg (2022) also show that this relationship is dynamic, similarly to political factors, with the significance of COVID-19 rates decreasing over time. Further, by controlling separately for COVID-19 rates and other political and community demographic factors, prior studies may muddle the ways in which

prior and current COVID-19 conditions influenced and interacted with these other factors (Harris & Oliver, 2021). Indeed, Kretchmar and Brewer's (2022) analysis shows, COVID-19 concerns and rates of spread did play a significant role in Democratic-leaning areas; yet they were not as important to decision-makers and the public in Republican-leaning areas. Thus, school reopening decisions likely reflected a complex combination of factors, wherein the COVID-19 context mattered.

School Sector and Competition

Evidence on the impact of competition (e.g., from charter or private schools) is mixed. Hartney and Finger (2021) find that a greater Catholic school presence is associated with greater likelihood of in-person reopening; but Harris & Oliver (2021) find that private school and charter school market share do not predict in-person reopening. Marianno et al. (2022) did not find charter schools enrollment level to significantly predict reopening decisions in 250 large districts.

Charter schools themselves appear to be influenced by similar contextual and constituent factors as traditional public schools. Based on data from twenty-two states in the COVID-19 School Data Hub, Cohodes and Pitts (2021) write that “there’s no evidence that charter schools are more nimble when it comes to learning mode. Indeed, if anything, they appear to be less flexible, and least-likely to offer in-person learning” (p. 2). Camp & Zamarro (2021) also show going to a charter is associated with greater likelihood of remote and lower likelihood of in-person (and no major difference from TPS related to hybrid). Grossmann et al. (2021) show in Michigan that charters were less likely to be in-person when located in districts with higher levels of Democratic presidential votes in 2016, though in majority-Black districts charters were more likely to plan for in-person instruction than public schools. Private schools appear to differ significantly, offering in-person options at greater rates (Camp & Zamarro, 2021).

Racial and Socioeconomic Differences in Parent Modality Preferences

Studies examining parent preferences and participation in in-school or remote learning do not directly examine the factors predicting districts' modality decisions. Still, the expressed preferences and actual decisions of parents are relevant, as parents are one of the most important constituencies for districts. The studies on this topic do not provide direct evidence of how parents may have influenced district decisions (or been influenced by them), but they do show the strong relationship between school reopening and parent preferences and behavior.

The most significant finding from this literature is that the availability of in-person instruction structured students' learning modalities. Black, Hispanic, and low-income families, families in more heavily Democratic areas, and families in public schools rather than private schools had systematically less access to in-school options, which explains a significant share of the racial and socioeconomic gaps for in-person learning (Calarco et al., 2021; Camp & Zamarro, 2021; Cotto Jr. & Woulfin, 2021; Grossmann et al., 2021; Haderlein et al., 2021; Harris & Oliver, 2021; Kogan, 2021; Parolin & Lee, 2021). Studies on public school disenrollment reinforce this finding, showing that remote-only instruction increased disenrollment in some places (Dee et al., 2021; Musaddiq et al., 2021).

Still, as Camp & Zamarro (2021) found, having an in-person option available was not determinative. While parents' choices were structured by the modalities available to them, they were further shaped by individual factors. For example, Calarco et al. (2021) and Cotto Jr. & Woulfin (2021) show the importance of socioeconomic circumstances. Higher-socioeconomic status parents were more likely to choose in-school learning because of demands related to their work schedules and needs for childcare. While some lower-socioeconomic status parents had the same concerns and simply lacked access to in-school options, others felt less pressure because they

found themselves unemployed during the pandemic and thus available to oversee remote learning. In addition to socioeconomic circumstances, modality choices were strongly related to partisanship. Democratic voters—measured by political lean, partisan affiliation, or whether the person voted for Trump—were less likely to prefer or have their children participate in in-person instruction (Camp & Zamarro, 2021; Collins, 2021; Grossmann et al., 2021; Haderlein et al., 2021; Henderson et al., 2021; Kogan, 2021).

Evidence on the direct influence of exposure to COVID-19 is similarly mixed in this research (Calarco et al., 2021; Camp & Zamarro, 2021; Collins, 2021; Kogan, 2021)—but again, this may be because it is operationalized incorrectly. While other studies focus on community spread rates, for example, Darling-Aduana et al. (2022) found that families’ choice of modality was most strongly associated with school-level infection rates—an association that was “relatively uniform within schools” (p. iii). Thus, more immediate exposure to or information about COVID-19 risk at the school level, along with the peer influence of other parents’ choices, may have been more influential (Darling-Aduana et al., 2022).

Limitations of the Current Literature

There are several limitations in the existing research on school reopening, which primarily emerge from existing studies’ reliance on quantitative data and methods. Researchers have been largely unable to draw causal inferences, operationalize reopening adequately, and examine charter schools as closely as public schools.

Causality

Generally, the complexity and disruptive nature of the pandemic creates problems for quasi-experimental research designs (Bacher-Hicks & Goodman, 2021). Of the studies reviewed here, only two studies use experimental or quasi-experimental research designs. First, Collins

(2021) presents evidence from a survey experiment to show that trusted political elites can influence the public's support for school reopening by communicating their position on the issue. While the findings suggest that political elites shaped the context for school reopening, the study does not analyze how they had actually done so; and does not provide evidence for how those preferences may be related to reopening decisions by school and district leaders. Second, as one component of their study, Hartney and Finger (2021) use an instrumental variable design to infer the causal effect of Catholic school presence on public school reopening decisions. They find that public school districts with a greater Catholic school presence were more likely to offer in-person classes in fall 2020. While this element of their research design is credibly causal, they do not present causal evidence for other factors they highlight (e.g., COVID-19 rates, partisanship), nor do they attend to the competitive effects of other forms of choice (e.g., charter schools).

Beyond the specific contributions and limitations of those studies, there is the broader limitation related to capturing meanings, contexts, and causal processes through quantitative research (Maxwell, 2012). Illustrative of this point is Harris and Oliver's (2021) note that associations identified in the existing quantitative studies must be interpreted with caution:

First, the fact that unions opposed reopening was itself partly driven by health considerations for their union members. This highlights the difficulty of separating political and health factors...Second, and more broadly, voting behavior has become more aligned with demographics in recent decades. Ninety-one percent of Black voters, for example, voted for the 2016 Democratic candidate for president, Hillary Clinton, and these same Black adults were also at greater risk of contracting COVID because they were more likely to work in jobs that required in-person activity. When various factors are so highly correlated, it can be difficult to understand which is causing which. (p. 2)

The quantitative studies on reopening tell a relatively consistent story: partisanship, union strength, and district demographics are strongly related to reopening decisions, and the evidence on COVID-19 rates is mixed. What these findings do not reveal is *how* or *why* partisanship, union strength, and district demographics matter, or as suggested by Harris and Oliver (2021) how they are interrelated. By contrast, Kretchmar and Brewer's (2022) qualitative case study identifies the specific ways in which partisan polarization around COVID-19 health guidance among political elites and their constituents influenced district planning and decision-making.

Definitions of Modality

Another limitation of the existing research is the way “reopening” is operationalized. There are two key components: the mode of instruction offered and the time period in which it is offered. For mode of instruction, most studies operationalize modality dichotomously (i.e., remote or any in-person) or categorically (i.e., remote, hybrid, in-person), based on data aggregated from public data sets or district plans or websites. Houston and Steinberg (2022) take counties as their unit of analysis and calculate the “average weekly in-person instruction rate within each county” (p. 12). For the time period, most studies focus on only fall 2020 (DeAngelis & Makridis, 2021, 2022; Hartney & Finger, 2021; Valant, 2020) or fall 2020 and one other point in time (Grossmann et al., 2021; Harris & Oliver, 2021). Other studies that examine reopening patterns over more periods of time (e.g., Cohodes & Pitts, 2021; Diemer & Park, 2022; Haderlein et al., 2021; Marianno et al., 2022) are more limited in their investigation of factors associated with reopening. Houston and Steinberg's (2022) study stands out: using multiple time periods, they show that COVID-19 rates and political factors were more influential for initial reopening decisions, but less influential later in the school year. Kretchmar & Brewer (2022) also offer a more longitudinal perspective, describing how their case districts made decisions over time.

As a whole, the existing research glosses over some important differences in how and when reopening happened. Students learning through the same modality did not all have the same experience (Haderlein et al., 2021). If reopening is defined as offering in-person instruction fully or partially (i.e., hybrid), the actual implementation of those modalities may differ in ways that are not captured in the quantitative data (e.g., Bartlett, 2022). Reopening is also better thought of as a dynamic process than static status. Analyses that only examine one point in time miss this, and analyses that show changes in modality over time hint at it.

Charter School Reopening

The existing literature is also limited in its attention to charter schools and comparisons between public and charter schools. There are some studies that compare the organizational responses to the pandemic by sector (e.g., Harris et al., 2020). Only four reopening studies, however, examine both charter and public schools. Two of those studies examine how specific factors (e.g., partisanship, demographics) influenced their reopening (Cohodes and Pitts, 2021; Grossmann et al., 2021). Two others include both public and charter school students in their analysis but do not examine differences between them. The remaining reopening studies only examine public school districts. In some cases, this is due to data limitations (e.g., exclusion of charter schools from readily available data sets); in others, it is due to the topic of interest (e.g., public school district union strength). Whether a student attends a public, charter, or private school is captured more regularly in the literature on parent preferences, since researchers often used survey or administrative data with students' school type indicated.

Comparing charter and public school reopening is important for a few reasons. A significant share of students attend charter schools in the United States, and they are disproportionately low-income and racially minoritized students (National Center for Education

Statistics, 2021), who were most negatively impacted by the health, economic, and educational consequences of COVID-19 (Hardy & Logan, 2020; Goldhaber et al., 2021; Magesh et al., 2021). In addition, examining reopening for charter and public schools can highlight the extent to which charters exercised market-based autonomy (Cohodes & Pitts, 2022), responded similarly or differently than public schools due to contextual factors and isomorphic pressures (Grossmann et al., 2021), or influenced public school decisions through competitive pressures (Hartley & Finger, 2021).

Discussion

What can we conclude from the research so far on COVID-19 and school reopening? While the existing literature points to key influences and dynamics, we need more research to move from headlines (e.g., partisanship mattered) to actionable findings that can inform decision-making during future crises. Qualitative research has an especially important role in this.

First, we know that the reopening process—as with many organizational decisions in education (Iannaccone, 1991)—was political. Reopening decisions were consistently associated with a district or county’s partisan composition—areas with a larger Democratic constituency were less likely to reopen, especially at the start of the year. These findings align with findings on the polarized response to the pandemic more broadly. Democratic lawmakers were more likely to enact stricter public health measures (Baccini & Brodeur, 2021); and liberals (compared to conservatives) expressed more support for such measures and more trust in public health experts, and adopted more health protective behaviors (Kerr et al., 2021). There are limits, however, to what we can learn about the politics of reopening from these quantitative findings (and their interpretation based on the broader politics of the pandemic). Measures of Democratic or Republican vote share are likely picking up multiple mechanisms: political differences in attitudes

towards reopening among the constituents of a school district, and the values and interests of educational leaders themselves and other influential actors.

This literature would also benefit from more nuance and better explanations for the relationship between COVID-19 conditions, public health guidance, and political factors. Initial studies contributed to an early narrative that reopening decisions were “just about politics” and not based on the variable conditions of the pandemic (Cohen, 2022). More accurately, political factors and public health conditions were interrelated—for example, in how decision-makers and their constituents formed their views of the health risk, how public health guidance was issued and adopted, and how those views and the conditions changed over time (Harris & Oliver, 2021; Houston & Steinberg, 2022). Kretchmar and Brewer (2022) offer some evidence to this effect, but we need more qualitative studies, from more places and with more data directly from educational leaders, to explain how these factors were interrelated in shaping their decisions.

Second, we know teachers and unions played an important role, but we have an incomplete story. Marianno et al. (2022) suggest that unions influenced reopening through their existing bargaining and negotiating power rather than new efforts to shape the narrative of the pandemic or mobilize new forms of influence. But how exactly did unions leverage their positions (e.g., stance on issues, tactics used)? Further, unions likely influenced how districts reopened (e.g., staffing different modes of instruction, limitations on classroom capacity), not just when, and this is not captured in the existing research.

The role of teachers more broadly is also underexamined. Teachers reported significantly greater levels of stress during the pandemic, and a narrative of impending resignations and retirements took hold during the pandemic (Barnum, 2022)—each of which may have influenced reopening. The role of the public’s perceptions of teachers also warrants more attention, especially

since Houston and Steinberg (2022) and Kretchmar and Brewer (2022) offer some conflicting findings. Finally, the absence of charter schools in much of the research is a notable omission for these lines of inquiry. Since few charter schools are unionized (Lavery & Jochim, 2022), studying their reopening patterns and processes might further illuminate the role of unions and teachers relative to other factors.

Third, we can assume parental preferences interacted with reopening, but the nature of that relationship remains unclear. Existing research establishes a clear—but not clearly causal—relationship between the availability of in-person options and preferences for or selection of in-person learning. Better evidence on the reopening process—including how parents engaged with schools and districts, and how decision-makers learned about and perceived parent preferences—can provide explanations and useful recommendations for elevating parent voice in educational decisions during a crisis.

Conclusion

Taken together, the existing body of research reinforces the idea that lawmakers and educational leaders need to navigate political dynamics and the interests of key stakeholders (e.g., teachers, parents) when making decisions in times of crisis. Yet, the current evidence is limited insofar as it does not clarify the specific way competing interests and contextual influences shaped decision-making. Consequently, its lessons for policy and practice remain somewhat unclear. School closures during the pandemic were a significant event with ongoing consequences for students (Goldhaber et al., 2022; Naff et al., 2022; Zamarro et al., 2022). Further, the COVID-19 pandemic is ongoing, and many students experienced school closures again this year. More research—especially rich qualitative analyses—can offer guidance for how we might structure

educational organizations and decision-making processes to meaningfully incorporate input and balance the interests of different stakeholders during future crises.

We can also draw a broader lesson about knowledge production and the influence of research in our field. The rapid production and dissemination of this (almost entirely) quantitative research was consequential not only in the limitations of findings but also in the way those findings were interpreted and disseminated in public discourse (Cohen, 2022). Assembling mixed-methods teams from the outset of such projects may make the use of large-scale and readily available quantitative data more productive, by strengthening interpretations of quantitative results and improving the quality of findings overall.

References

- Baccini, L., & Brodeur, A. (2021). Explaining governors' response to the COVID-19 pandemic in the United States. *American Politics Research*, 49(2), 215-220.
- Bacher-Hicks, A. & Goodman, J. (2021). The Covid-19 pandemic is a lousy natural experiment for studying the effects of online learning. *Education Next*, 21(4).
<https://www.educationnext.org/covid-19-pandemic-lousy-natural-experiment-for-studying-the-effects-online-learning/>
- Bartlett, L. (2022). Specifying hybrid models of teachers' work during COVID-19. *Educational Researcher*. <https://doi.org/10.3102/0013189X211069399>
- Barnum, M. (2022, March 9). Uptick but no exodus: Despite stress, most teachers stay put. *Chalkbeat*. <https://www.chalkbeat.org/2022/3/9/22967759/teacher-turnover-retention-pandemic-data>
- Calarco, J. M., Coleman, M., & Halpern-Manners, A. (2021). *Mechanisms of stratification in in-person instruction in the wake of COVID-19* [Working Paper].
<https://osf.io/preprints/socarxiv/2czkx>
- Camp, A. M. & Zamarro, G. (2021). Determinants of Ethnic Differences in School Modality Choices During the COVID-19 Crisis. *Educational Researcher*.
<https://journals.sagepub.com/doi/abs/10.3102/0013189X211057562>
- Cohen, R. M. (2022, May 23). Pandemic school reopening were not just about politics. *Vox*.
<https://www.vox.com/2022/5/23/23132118/school-reopening-covid-pandemic-remote-learning>
- Cohodes, S. & Pitts, C. (2021). *A new COVID-19 data source for answering emerging pandemic questions*. The Evidence Project at the Center for Reinventing Public Education.
<https://crpe.org/wp-content/uploads/final-COVID-school-data-hub-blog.pdf>
- Collins, J. E. (2021). *Who wants to reopen schools in a pandemic? Explaining public preferences reopening schools and public compliance with reopening orders during the COVID-19 pandemic*. Annenberg EdWorkingPapers. <https://www.edworkingpapers.com/ai21-448>
- Cotto Jr., R. & Woulfin, S. (2021). Choice with(out) equity? Family decisions of child return to urban schools during COVID-19. *Journal of Family Diversity in Education*.
<https://familydiversityeducation.com/index.php/fdec/article/view/159>
- Darling-Aduana, J., Woodyard, H. T., Sass, T., & Barry, S. S. (2022). *Learning-mode choice, student engagement, and achievement growth during the COVID-19 pandemic*. National Center for the Analysis of Longitudinal Data in Education Research.
<https://caldercenter.org/publications/learning-mode-choice-student-engagement-and-achievement-growth-during-covid-19-pandemic>
- DeAngelis, C. A. & Makridis, C. (2021). Are school reopening decisions related to union influence? <https://onlinelibrary.wiley.com/doi/full/10.1111/ssqu.12955>
- DeAngelis, C. A. & Makridis, C. (2022). Are school reopening decisions related to funding? Evidence from over 12,000 districts during the COVID-19 pandemic. *Journal of School Choice*. <https://doi.org/10.1080/15582159.2022.2077164>
- Dee, T. S., Huffaker, E., Philips, C., & Sagara, E. (2021). *The revealed preferences for school reopening: Evidence from public-school disenrollment*. (EdWorkingPaper: 21-446). Annenberg Institute at Brown University. <https://doi.org/10.26300/ejq1-m085>
- Diemer, A. & Park, A. (2022). *The impact of rural and urban school reopening on Missouri students*. Urban Institute. <https://www.urban.org/sites/default/files/2022-03/Urban%20and%20Rural%20School%20Reopening%20in%20Missouri.pdf>

- Garcia, K. S. D., & Cowan, B. W. (2022). *The impact of school and childcare closures on labor market outcomes during the COVID-19 pandemic* (Working Paper w29641). National Bureau of Economic Research. <https://www.nber.org/papers/w29641>
- Goldhaber, D., Kane, T. J., McEachin, A., & Morton, E. (2022). *A comprehensive picture of achievement across the COVID-19 pandemic years: Examining variation in test levels and growth across districts, schools, grades, and students* (CALDER Working Paper No. 266-0522). National Center for Analysis of Longitudinal Data in Education Research. <https://caldercenter.org/publications/comprehensive-picture-achievement-across-covid-19-pandemic-years-examining-variation>
- Grossmann, M., Reckhow, S., Strunk, K. O., & Turner, M. (2021). All states close but red districts reopen: The politics of in-person schooling during the COVID-19 pandemic. *Educational Researcher*. <https://journals.sagepub.com/doi/10.3102/0013189X211048840>
- Haderlein, S. K., Saavedra, A. R., Polikoff, M. S., Silver, D., Rapaport, A., & Garland, M. (2021). Disparities in educational access in the time of COVID: Evidence from a nationally representative panel of American families. *AERA Open*. <https://journals.sagepub.com/doi/full/10.1177/23328584211041350>
- Hardy, B. & Logan, T. D. (2020). *Racial economic inequality amid the COVID-19 crisis*. Brookings Institution. <https://www.brookings.edu/research/racial-economic-inequality-amid-the-covid-19-crisis/>
- Harris, D. N. & Oliver, D. M. (2021). Why did so many public schools stay remote during the COVID crisis? *REACH*. <https://www.reachcentered.org/publications/why-did-so-many-public-schools-stay-remote-during-the-covid-crisis>
- Hartney, M. T. & Finger, L. K. (2021). Politics, markets, and pandemics: Public education's response to COVID-19. *Perspectives on Politics*. <https://doi.org/10.1017/S1537592721000955>
- Henderson, M. B., Houston, D., Peterson, P. E., & West, M. (2021). Parent Poll Reveals Support for School Covid-Safety Measures Despite Vaccine Hesitancy, Partisan Polarization. *Education Next*, 22(1). <https://www.educationnext.org/parent-poll-reveals-support-school-covid-safety-measures-despite-vaccine-hesitancy-partisan-polarization/>
- Houston, D. M. & Steinberg, M. P. (2022). *Public support for educators and in-person instruction during the Covid-19 pandemic* (EdWorkingPaper: 22-575). Annenberg Institute at Brown University. <https://doi.org/10.26300/ek3z-x247>
- Iannaccone, L. (1991). Micropolitics of education: What and why. *Education and Urban Society*, 23(4), 465-471.
- Kerr, J., Panagopoulos, C., & van der Linden, S. (2021). Political polarization on COVID-19 pandemic response in the United States. *Personality and Individual Differences*, 179, 1-9. <https://doi.org/10.1016/j.paid.2021.110892>
- Kogan, V. (2021). *What's behind racial differences in attitudes toward school reopening (and what to do about them)*. American Enterprise Institute. <https://www.aei.org/research-products/report/whats-behind-racial-differences-in-attitudes-toward-school-reopening-and-what-to-do-about-them/>
- Kretchmar, K., & Brewer, T. J. (2022). Neoliberalism, COVID, anti-science, and the politics of school reopening. *Education Policy Analysis Archives*, 30, (42). <https://doi.org/10.14507/epaa.30.6959>
- Lavery, L., & Jochim, A. (2022). Why charter teachers unionize. *Educational Policy*. <https://doi.org/10.1177/08959048221087215>

- Magesh, S., John, D., Li, W. T., Li, Y., Mattingly, A., Jain, S., Chang, E. Y., & Ongkeko, W. M. (2021). Disparities in COVID-19 outcomes by race, ethnicity, and socioeconomic status: A systematic review and meta-analysis. *JAMA Network Open*, 4(11), 1-16. doi:10.1001/jamanetworkopen.2021.34147
- Marianno, B., Hemphill, A. A., Loures-Elias, A. P. S., Garcia, L., Cooper, D., & Coombes, E. (2022). Power in a pandemic: Teachers unions and their responses to school reopening. *AERA Open*. <https://journals.sagepub.com/doi/10.1177/23328584221074337>
- Maxwell, J. A. (2012). The importance of qualitative research for causal explanation in education. *Qualitative Inquiry*, 18(8), 655–661. <https://doi.org/10.1177/1077800412452856>
- Musaddiq, T., Stange, K. M., Bacher-Hicks, A., & Goodman, J. (2021). *The pandemic's effect on demand for public schools, homeschooling, and private schools* [NBER Working Papers 29262]. National Bureau of Economic Research. <http://www.nber.org/papers/w29262>
- Naff, D., Williams, S., Furman-Darby, J., & Yeung, M. (2022). The mental health impacts of COVID-19 on PK–12 students: A systematic review of emerging literature. *AERA Open*, 8(1), 1-40. <https://doi.org/10.1177/23328584221084722>
- National Academies of Sciences, Engineering, and Medicine. (2022). *The future of education research at IES: Advancing an equity-oriented science*. U.S. Department of Education, Institute for Education Sciences. <https://nap.nationalacademies.org/catalog/26428/the-future-of-education-research-at-ies-advancing-an-equity>
- National Center for Education Statistics. (2021). *Public charter school enrollment. Condition of education*. U.S. Department of Education, Institute of Education Sciences. <https://nces.ed.gov/programs/coe/indicator/cgb>.
- Parolin, Z. & Lee, E. K. (2021). Large socio-economic, geographic and demographic disparities exist in exposure to school closures. *Nature Human Behavior*. <https://www.nature.com/articles/s41562-021-01087-8>
- Valant, J. (2020). *School reopening plans linked to politics rather than public health*. Brookings. <https://www.brookings.edu/blog/brown-center-chalkboard/2020/07/29/school-reopening-plans-linked-to-politics-rather-than-public-health/>
- Zamarro, G., Camp, A., Fuchsman, D., & McGee, J. B. (2022). *Understanding how COVID-19 has changed teachers' chances of remaining in the classroom* (EdWorkingPaper: 22-542). Annenberg Institute at Brown University. <https://doi.org/10.26300/2y0g-bw09>

Table 1*Overview of Research on School Reopening During COVID-19*

Factors Associated with Reopening, 2020-21 School Year											
Authors (Date)	Methods	Charters included?	Multiple points in time?	Partisan vote share	Union strength	COVID-19: Area rates	District demographics	Urbanicity	School type	Charter school competition	Private school competition
Cohodes & Pitts (2021)*	Quant	Yes	Yes	-	-	-	-	Yes	No	-	-
DeAngelis & Makridis (2021)*	Quant	No	No	Yes	Yes	No	-	-	-	-	-
DeAngelis & Makridis (2022)*	Quant	No	No	Yes	Yes	No	-	-	-	-	-
Diemer & Park (2022)*	Quant	Yes	Yes	-	-	-	Yes	Yes	-	-	-
Grossmann et al. (2021)*	Quant	Yes	Yes	Yes	Yes	No	Yes	-	Yes	-	-
Haderlein et al. (2021)	Quant	Yes	Yes	-	-	-	Yes	Yes	-	-	-
Harris & Oliver (2021)*	Quant	No	Yes	Yes	Yes	Yes	Yes	-	-	No	No
Hartney & Finger (2021)*	Quant	No	No	Yes	Yes	No	Yes	-	-	-	Yes
Houston & Steinberg (2022)*	Quant	No	Yes	Yes	Yes	Yes	Yes	-	-	No	No
Kretchmar & Brewer (2022)*	Qual	No	No	Yes	-	Yes	Yes	Yes	-	-	-
Marianno et al. (2022)*	Quant	No	No	Yes	Yes	No	Yes	No	-	No	-
Valant (2020)*	Quant	No	No	Yes	-	No	-	-	-	-	-

Racial and Socioeconomic Differences in Parent Modality Preferences, 2020-21 School Year											
Authors (Date)	Methods	Charters included?	Political elite & media signaling	COVID-19: Area rates	COVID-19: School rates	COVID-19: experience or perceived risk	School offers in-person	School type	Classmates' modality	Parent employment	Parent political affiliation
Calarco et al. (2021)*	Mixed	-	-	Yes	-	Yes	Yes	Yes	-	Yes	-
Camp & Zamarro (2021)*	Quant	Yes	-	No	-	Yes	Yes	Yes	-	-	Yes
Collins (2021)	Quant	-	Yes	-	-	No	-	-	-	-	Yes
Cotto Jr. & Woulfin (2021)*	Mixed	Yes	-	-	-	Yes	Yes	Yes	-	Yes	-
Darling-Aduana et al. (2022)*	Quant	Yes	-	-	Yes	-	-	-	Yes	-	-
Dee et al. (2021)	Quant	Yes	-	-	-	-	Yes	-	-	-	-
Grossmann et al. (2021)*	Quant	Yes	-	-	-	-	-	Yes	-	-	Yes
Haderlein et al. (2021)*	Quant	Yes	-	-	-	-	Yes	-	-	-	Yes
Henderson et al. (2021)	Quant	Yes	-	-	-	-	-	Yes	-	-	Yes
Kogan (2021)*	Quant	No	-	No	-	No	Yes	-	-	-	Yes
Musaddiq et al. (2021)	Quant	Yes	-	-	-	-	Yes	-	-	-	-
Parolin & Lee (2021)	Quant	-	-	-	-	-	Yes	-	-	-	-

*Denotes that the study directly addressed the topic.

Appendix A: Literature Search and Inclusion Criteria

Given that the research on K-12 school reopening decisions in the United States during the COVID-19 pandemic has been emerging rapidly, I did not use a systemic literature review method. Rather, I began with a handful of studies, and I used a combination of snowball sampling from existing studies and monitoring for new publications in order to account for a comprehensive set of research. I restricted the review to studies of K-12 school reopening in the United States. Since starting my review, some of these studies have since been published in peer-reviewed journals, but many remain in other formats (e.g., working papers, policy briefs). Given the emergent nature of the literature, I did not restrict the review to articles published in peer-reviewed journals.

My criteria for whether a study was relevant to the review emerged from my initial scan of the literature. I initially defined two distinct research questions in the literature:

1. What factors are associated with the decisions that districts or schools made to reopening in-person instruction in the 2020-21 school year?
2. What factors are associated with the racial and socioeconomic divergence in preferences for and participation in in-person instruction?

While the focus of this review is the first question, I also included studies addressing the second question since they provide some additional context and insight on the issue. If a study directly or implicitly addressed either of these questions with empirical evidence, I included it in my review (Table 1). The few studies that I describe as not “directly” addressing the topic provide relevant evidence that address the research questions, even though the authors of those studies articulated different research question than those I outline above.