



School Turnaround in a Pandemic: An Examination of the Outsized Implications of COVID-19 on Low-Performing Schools and their Communities

July 2023

Education Policy Innovation Collaborative

COLLEGE OF EDUCATION | MICHIGAN STATE UNIVERSITY

236 ERICKSON HALL, 620 FARM LANE, EAST LANSING, MI 48824 | www.EPICedpolicy.org

ABSTRACT

Turnaround schools and districts that were charged with making rapid and dramatic improvements before the COVID-19 pandemic struck faced considerable challenges carrying out improvement efforts during pandemic schooling. Using survey and administrative data collected during the pandemic, we document some of the ways in which students and educators in Michigan's turnaround schools and districts experienced the pandemic. We show that the communities in which turnaround schools are located were hardest hit by the pandemic and school and district operations were substantially disrupted. By extension, turnaround districts and especially the lowest performing schools in those districts that were targeted for school-level turnaround experienced high rates of student absenteeism, low student and parent engagement, and, ultimately, significantly smaller gains on math and reading benchmark assessments than in non-turnaround districts. Our findings have implications for policy as states amplify school and district turnaround efforts that were disrupted by the pandemic.

DISCLAIMER

The Education Policy Innovation Collaborative (EPIC) at Michigan State University is an independent, non-partisan research center that operates as the strategic research partner to the Michigan Department of Education (MDE) and the Center for Educational Performance and Information (CEPI). EPIC conducts original research using a variety of methods that include advanced statistical modeling, representative surveys, interviews, and case study approaches. Results, information, and opinions solely represent the author(s) and are not endorsed by, nor reflect the views or positions of, grantors, MDE and CEPI, or any employee thereof. All errors are our own.

JULY 2023

School Turnaround in a Pandemic: An Examination of the Outsized Implications of COVID-19 on Low-Performing Schools and their Communities

AUTHORS

Erica Harbatkin, *EPIC, Florida State University*

Aliyah McIlwain, *Michigan State University*

Katharine O. Strunk, *EPIC, University of Pennsylvania*

INTRODUCTION

The lowest performing schools and districts in the United States serve large proportions of students of color, low-income students, and students with lower levels of familial education (Rabinovitz, 2016; Reardon, 2016). Moreover, persistently low performing schools and districts tend to be located in some of the poorest areas in the country, providing little in the way of educational opportunity to build up either individual or collective capacity in these communities (e.g., Dragoset et al., 2019; Heissel & Ladd, 2018; Strunk et al., 2020, 2021; Thompson et al., 2016; Zimmer et al., 2017). Together, these disparities contribute to ongoing and persistent opportunity and achievement gaps between advantaged and disadvantaged students, such that early achievement gaps between groups of students persist and grow throughout middle and high school and into postsecondary education and the workforce (e.g., Goldhaber et al., 2018; Hanushek et al., 2019; Jang & Reardon, 2019; Shores & Steinberg, 2019).

Policymakers have long sought to improve these low-performing schools and districts, thus enhancing educational opportunities for the students and communities served by these districts. Early systematic efforts at school improvement, labeled “whole school

reforms,” entailed a slow and steady approach to raising student achievement in high poverty, low-performing schools (Aladjem et al., 2010; Borman et al., 2003; Herman et al., 2008). Beginning in the early 2000s, the federal government began incentivizing and eventually mandating that states implement school and district turnaround reforms focused on making “rapid and dramatic” improvements to student and school outcomes — typically within three years (Herman et al., 2008). A growing evidence base finds that at least some of these turnaround interventions were effective at improving student achievement in the nation’s lowest performing schools and districts (see Redding & Nguyen (2020) and Schueler et al. (2021) for comprehensive reviews).

However, the COVID-19 pandemic greatly disrupted K-12 education in the United States, and ongoing turnaround interventions with it. Additionally, because the pandemic had an outsized impact on areas with high rates of poverty and underrepresented minorities (Cyrus et al., 2020; Finch & Hernández Finch, 2020), it is becoming increasingly clear that the pandemic also had an outsized impact on the schools and districts housed within them—exactly those schools and districts undergoing turnaround interventions. Meanwhile, the strategies that were integral to pre-pandemic turnaround models (e.g., extended learning time, widespread educator replacement, using data to inform school- and district-wide instructional strategies) were largely infeasible during pandemic learning. There is thus growing concern that pandemic-induced disruptions to in-school learning as well as shocks to students’ out-of-school contexts in the nation’s turnaround schools and districts have resulted in lost opportunities to learn that may have inhibited improvement efforts and are likely to continue to stymie accountability reforms moving forward.

Because the pandemic’s challenges have been especially acute in communities with already high rates of poverty and communities of color, low-performing turnaround schools and districts located in these communities have been tasked with an especially daunting undertaking—to improve student outcomes against a backdrop of illness, death, reduced income, and lost access to previously available structural resources such as child care for younger children. In this paper, we examine the ways that the pandemic has affected low-performing turnaround schools, districts, and the communities they serve in the context of the Partnership Model, a state turnaround initiative to support the lowest performing schools and districts in Michigan. Given that Michigan ranks in lower-middle of the country on the National Assessment of Educational Progress (NAEP),¹ its Partnership schools and districts likely reflect the realities of other turnaround schools and districts across the country; they have low average student achievement, are located in communities with disproportionately high rates of poverty and unemployment, have greater shares of low-income students and under-represented minorities, and have greater challenges with education funding and associated teacher workforce concerns (Corallo & McDonald, 2001; Pendola, 2022; Strunk et al., 2021). In Michigan, Partnership schools are those that are explicitly targeted for being the lowest performing in the state, and the districts that house them—entitled Partnership districts—are tasked with improving district

operations in order to substantially improve Partnership schools. Non-Partnership schools in Partnership districts also have very low student achievement relative to the state average, though by definition not as low as Partnership schools.

Understanding pandemic-era teaching and learning in these turnaround schools and districts is critically important as federal and state accountability systems resume. Nationally, the number of schools with federal low-performing designations has ballooned since the pandemic's onset (Bleiberg, 2023). Many schools and districts that were previously designated as low performing have been reidentified post-pandemic (Singer & Cullum, 2023) and are this time being tasked with improving student outcomes following years of interrupted learning. To better understand the contexts in which teaching and learning occurred in these districts during the pandemic, we ask:

1. How did Partnership districts and their communities experience health, socioeconomic, and mental health outcomes during the pandemic and how did these experiences vary by Partnership school status?
2. How did Partnership district educators experience teaching and learning during the pandemic and how did these experiences vary by Partnership school status?
3. To what extent did learning gains in Partnership districts differ from the state average during the pandemic?

To answer these questions, we draw from county-level COVID-19 data from the Michigan Department of Health and Human Services, district-level plans for instructional modality submitted to the state, survey data from teachers and principals in Partnership districts, and district-level data on fall 2020 and spring 2021 benchmark assessments. This paper makes two primary contributions to the literature. First, we bring to bear unique survey data on educator experiences in low-performing turnaround schools and districts during the pandemic. We are able to examine factors likely to have inhibited student learning during the pandemic and to observe some of those factors prior to the pandemic as well. Second, while there is a robust and growing literature on socioeconomic and demographic achievement gaps during the pandemic, we are not aware of any research on the within- and out-of-school challenges underlying pandemic learning disruptions in low-performing schools and districts identified for turnaround. Elucidating the nature and extent of these challenges is critical to both planning for and understanding school and district accountability in a post-pandemic context.

We find that Partnership communities experienced more COVID-19 cases and deaths than other communities in the state, especially in the first wave of the pandemic. Partnership districts also relied more heavily than non-Partnership districts on remote instruction, which was associated with lower learning gains statewide during the 2020-21 school year (Kilbride, Hopkins, Strunk, et al., 2021). In turn, Partnership school and

district educators reported substantial disruptions in their students' lives that appeared to hamper students' ability to attend and engage in schooling. For instance, in the 2020-21 school year, teachers in Partnership districts reported that each day, about 4 in 10 students in their districts were absent from class and that figure was even higher in Partnership schools in those districts. Educators in Partnership districts and especially Partnership schools reported significant challenges educating students who did not attend class, motivating students, and engaging parents, and believed that these challenges would ultimately hinder school and district improvement efforts. Unsurprisingly given the disproportionate challenges faced by students and educators in these districts, Partnership districts made significantly lesser learning gains, on average, than non-Partnership districts during the 2020-21 school year.

The remainder of this paper proceeds as follows. First, we review existing research that suggests the pandemic may have differentially impacted low-performing schools, districts, and the communities they serve. We then describe the Partnership Model and Partnership schools and districts in more detail. We turn next to a description of our data and methods, followed by a summary of findings organized by research question. We conclude with a discussion of the disparate impact of COVID-19 on the lowest performing districts in Michigan and policy implications.

LITERATURE REVIEW

In this section, we overview the literature illustrating the reasons low-performing schools, districts, and the communities they serve may have experienced the pandemic more acutely than other contexts. Next, we describe the emerging literature shaping concerns about growing opportunity gaps during the pandemic. We conclude by highlighting the subset of school and district turnaround literature that suggests the pandemic is likely to undermine improvement efforts.

The Pandemic's Disparate Impact on Low-Performing Schools and Their Communities

Low-performing schools are often located in communities of color with high rates of poverty (Corallo & McDonald, 2001; Harris, 2007; Hatch & Harbatkin, 2021; Reardon, 2016; Strunk et al., 2020)—the same communities that grappled with the most profound challenges stemming from the COVID-19 pandemic. These communities faced steeper economic declines, with Black, Hispanic, and economically disadvantaged households experiencing more income loss than White, Asian, and higher-income households over the first six months of the pandemic (Karpman et al., 2020). Early job losses were especially pronounced for Black and Hispanic workers in April and May 2020 when service sector jobs shut down, and Black workers re-entered the workforce at a slower rate than workers of other races (Montenovo et al., 2020). Losses fell heavily on families; during the pandemic, households with children were

approximately 2.5 times more likely to be food insecure than households without (Niles et al., 2020). Decreased income contributed to higher rates of economic hardship and food insecurity—in particular prior to the adoption of the child tax credit and after its expiration (Ceron, 2021; US Census Bureau, 2021; Zippel, 2021).

Profound economic challenges came alongside acute health challenges. People in communities of color and with high poverty rates, like Partnership communities, were more likely to work in in-person settings where there was a greater risk of contracting COVID-19, while people in whiter and more affluent communities had more opportunity to work from home and evade infection (Béland et al., 2020; Montenegro et al., 2020). Partly as a result, Black and Hispanic people and those in poverty contracted, were hospitalized for, and died from COVID-19 at higher rates—especially in the early phases of the pandemic when medical providers lacked sufficient resources and were still learning how to treat infections, and mortality rates were exceedingly high (Adhikari et al., 2020; Gross et al., 2020; Wadhwa et al., 2020). Black, Hispanic, and American Indian children, in turn, lost parents and caregivers to COVID-19 at higher rates than White children (Hillis et al., 2021)

When the child care market overall contracted as a result of the pandemic (Ali et al., 2021), losses fell disproportionately on Black and economically disadvantaged families, for whom child care was already relatively less affordable and available (Hardy & Logan, 2020). Parents faced difficult decisions between leaving their jobs and giving up reliable income to stay home, care for their younger children, and support their older children's at-home learning—or going to work, exposing themselves and their families to the virus, and leaving children at home and often unsupervised (Adams & Todd, 2020; Garbe et al., 2020; Sharma, Chuang, et al., 2020; Sharma, Haidar, et al., 2020). While more affluent families may have had the reserves to survive on a single income, families already living in poverty and single-parent households—both of which are disproportionately represented in the communities served by low-performing schools and districts—did not (Radey et al., 2021).

Limited access to resources such as reliable internet, technology devices, and parental support that may have hindered opportunity to learn prior to the pandemic became especially salient as schools shifted to remote learning. Indeed, a nationally representative survey found that Black, Hispanic, and low-income families had less reliable access to the internet, and particularly to high-speed internet, were less likely to have at least one computing device for each child in their household, and were less likely to have parents who could help with homework than White and higher-income families (Darling-Hammond et al., 2020; Haderlein et al., 2021). The implications of these inequities became more dire during the pandemic, as access to reliable internet was important to engage with online learning (Bacher-Hicks et al., 2021; Domina et al., 2021). Further, districts with lower test scores, high rates of poverty, and more students of color relied more heavily on remote learning for a longer portion of the 2020-21 school year even as other schools returned to in-person learning, and Black and Hispanic students

were more likely than White students to learn remotely (Camp & Zamarro, 2022; Hopkins et al., 2021; Marshall & Bradley-Dorsey, 2020; Park, 2021; Parolin & Lee, 2021).

Growing Opportunity Gaps

While existing research on student achievement specifically in turnaround schools during the pandemic is limited, there is growing evidence that economically disadvantaged, Black, and Hispanic and Latino/a/x students experienced more interrupted learning than their peers during the pandemic (Agostinelli et al., 2022; Betebenner et al., 2021; Dorn et al., 2020; Engzell et al., 2021; Kilbride, Hopkins, Strunk, et al., 2021; Kuhfeld et al., 2022; Lewis et al., 2021). Testing participation rates were also lower among these groups (Jacobson, 2021; Kilbride, Hopkins, Strunk, et al., 2021; Meltzer, 2021), again suggesting they were more likely to be engaged in remote learning as testing largely occurred in person. There is strong evidence that remote learning was not as effective for students, on average, as in-person learning—and these disparities were even greater for economically disadvantaged students and students of color (Chetty et al., 2020; Goldhaber, Kane, et al., 2022; Halloran et al., 2021; Kilbride, Hopkins, Strunk, et al., 2021; Kogan & Lavertu, 2021; Sass & Goldring, 2021). There is also evidence that remote learning strategies were less rigorous in school districts with higher rates of economically disadvantaged students and students of color (Center on Reinventing Public Education, 2020; Malkus, 2020; Patrick et al., 2021) and that student participation and engagement in remote learning contexts was lower among Black and Hispanic students than their White peers (Besecker & Thomas, 2020).

The Pandemic and School Turnaround

The experience of turnaround schools and districts during the pandemic is important because existing best practices for school and district improvement would have been exceedingly difficult to implement in the pandemic context, therefore hampering ongoing improvement efforts. In particular, there are two key dimensions of school improvement that the pandemic may have impeded over and above its detrimental impact on communities, schools, and individuals: (1) building the school-level systems and processes necessary for meaningful and sustainable improvement (Adelman & Taylor, 2007; Meyers, 2020; Peurach & Neumerski, 2015); and (2) hiring, retaining, and developing highly effective teachers (Harbatkin, 2022; Heissel & Ladd, 2018; Henry et al., 2020; Henry & Harbatkin, 2020; Malen & Rice, 2016; Papay & Hannon, 2018; Strunk et al., 2016).

Developing and sustaining effective school-level systems and carrying out a clear and coherent set of reform strategies would have been a particular challenge during the pandemic. When schools quickly pivoted to online learning in 2019-20, continuing even well-established instructional programs would have been challenging—and doing so with recently adopted programs taken up as part of turnaround efforts even more difficult (Hamilton et al., 2020; Marshall et al., 2020). Then, upon the partial

return to in-person instruction in 2020-21, educators were tasked with helping their students recover from disrupted learning, and the instructional systems designed for pre-pandemic learning may have been less well-suited to student needs and more challenging to implement given the broader context. Collaboration opportunities—which are central to building and maintaining a shared sense of school culture and are important to turnaround (Pham, 2022)—suffered, and educators in turn reported challenges stemming from lost collaboration time (Kraft et al., 2021).

In addition, there are widespread concerns that the pandemic increased teacher burnout, uncertainty, and stress (Chan et al., 2021; Kim et al., 2022; Kraft et al., 2021; Pressley, 2021; Zamarro et al., 2021). The resulting fallout likely disproportionately affected turnaround schools because a large literature demonstrates that a stable and highly effective teacher workforce is critical to successful school turnaround (Burns et al., 2023; Henry et al., 2020, 2022; Henry & Harbatkin, 2020; Malen & Rice, 2016; Papay & Hannon, 2018; Strunk et al., 2020), and turnaround strategies are therefore often focused on building teacher effectiveness and increasing retention of the most effective teachers. Teacher retention during the pandemic was likely a constant concern for low-performing schools, which already struggled to retain highly effective teachers prior to the pandemic (Boyd et al., 2005), and hiring may have also been a challenge as the pandemic weakened labor markets—especially among women, who make up the majority of the teacher workforce (Calarco et al., 2021; Croda & Grossbard, 2021; Zamarro & Prados, 2021). Meanwhile, the shift to online instruction involved a learning curve for all teachers (Trust & Whalen, 2020) and laid bare existing resource inequities (Darling-Hammond et al., 2020). High quality teacher coaching, which requires a certain level of intensity, job-embedded practice, and active learning, would have been highly challenging to implement while teachers were delivering instruction online and were not interacting as part of their day to day work (Desimone & Garet, 2015; Garet et al., 2001; Kraft et al., 2018; Wei et al., 2009). As a result, the pandemic may have undercut efforts to develop teachers in turnaround schools and districts (VanLone et al., 2022)

Together, the research on effective practices for school turnaround combined with emerging research on educator experiences during COVID-19 raises concerns about how low-performing schools and districts could have continued their turnaround efforts during the pandemic and underscores the importance of understanding their context in implementing future accountability reforms.

SETTING

The federal Every Student Succeeds Act (ESSA) requires all states to identify their lowest performing schools for Comprehensive Support and Improvement (CSI) and turn them around over a three-year period. The Partnership Model of School and District Turnaround is Michigan's intervention to turn around its lowest performing schools under ESSA. Partnership districts—those that house at least one Partnership

school—are charged with developing and leading improvement efforts in Partnership schools. Partnership districts typically include both Partnership and non-Partnership schools, where their Partnership schools are the very lowest achieving in the state and their non-Partnership schools tend to be lower performing but not in the bottom 5%. These districts work with school and district leadership, a liaison from the Office of Partnership Districts (OPD) at the Michigan Department of Education (MDE), and community stakeholders to develop a turnaround plan that examines district and school strengths and weaknesses, identifies improvement goals to be met over 18- and 36-month timeframes, outlines strategies and reforms to meet those goals, and sets consequences for failing to meet those goals. The district is charged with implementing the plan over three academic years with support from its Intermediate School District (ISD) or Regional Educational Services Agency (RESA), identified community partners, and OPD.

The state identified its first cohort of Partnership schools in 2016-17 and its second in 2017-18, with implementation in each case beginning the year following identification. Both cohorts were selected because they were low performing in their respective year of Partnership identification. In this paper, we focus on the 99 schools and 27 districts operating under Partnership Agreements during the 2020-21 school year, which includes schools and districts from both cohorts pooled together.² There is evidence that prior to the pandemic, the Partnership Model was improving student achievement both in Partnership schools and other low-performing schools in Partnership districts (Burns et al., 2023). However, given preexisting challenges in Partnership schools and districts, there is reason to believe the pandemic may have thwarted this progress.

As is the case with low-performing schools and districts nationally, Partnership communities are home to a disproportionate share of the state's Black students, face higher rates of poverty and especially child poverty, have lower median incomes, and rely more on Supplemental Nutrition Assistance Program (SNAP) benefits than non-Partnership communities (Hatch & Harbatkin, 2021). Economic and racial differences are even more pronounced when comparing Partnership schools and districts with non-Partnership schools and districts. Table 1 provides descriptive statistics using U.S. Census data on Partnership communities compared with non-Partnership communities (Panel A) and statewide administrative data on Partnership schools, non-Partnership schools in Partnership districts, all schools in Partnership districts, and all other schools (Panel B). Panel A shows that the share of Black residents is twice as high in Partnership than non-Partnership communities (29% vs. 13%). Panel B shows that these disparities are even more pronounced at the school level, where 85% of the students in Partnership schools and 77% of the students in Partnership districts are Black compared with less than 16% of students in the rest of the state. Non-Partnership schools in Partnership districts are more similar to Partnership schools than the rest of the state but have fewer Black students, more Hispanic or Latino/a/x students, and more White students.

The second section of Panel A shows that Partnership communities are also home to more individuals, families, and children in poverty than non-Partnership communities. In particular, the child poverty rate in Partnership communities is 29%—which is 9 percentage points and about 40% higher than the child poverty rate in non-Partnership communities. High rates of poverty translate to higher rates of food insecurity in Partnership communities, where nearly one-third of households with children qualify for SNAP benefits compared with about one-fifth outside of Partnership communities. Again, these differences are even more pronounced at the district and school levels, shown in Panel B. On average, more than 90% of students served by Partnership schools and districts qualify as economically disadvantaged, compared with less than 60% elsewhere in the state. In sum, these county-, district-, and school-level differences underscore the high levels of racial and economic segregation present in Michigan’s communities and schools and highlight that the state’s lowest performing schools and districts serve a disproportionate share of its Black students and students in poverty. The disparities are most striking for Partnership schools, which are those explicitly targeted for school turnaround, and are also salient in non-Partnership schools in Partnership districts.

TABLE 1

Though not shown here, technology access is also less pervasive in Partnership than non-Partnership communities. Residents of Partnership communities are more likely to rely exclusively on smartphones rather than desktop or laptop computers. Additionally, while Partnership districts are largely located in urban areas where broadband infrastructure is in place, residents of non-urban Partnership communities are about 9% less likely to have access to broadband (Hatch & Harbatkin, 2021). While we do not have the data to measure these technology disparities at the school level, the county- versus district- and school-level differences in Table 1 highlight that Partnership districts and especially the Partnership schools within those districts tend to serve the most disadvantaged populations in their communities, suggesting that school- and district-level technological disparities are likely more pronounced than county-level differences.

Together, these data suggest that Partnership communities are far more likely to have fared worse during the pandemic, both because their populations were those known to be most impacted by the pandemic and because they did not have the fiscal or technological resources to enable them to adjust to shifts in learning structures. These factors likely influenced how students and educators in Partnership schools and districts experienced teaching and learning during the pandemic, with implications for carrying out school and district improvement strategies expected under turnaround reforms.

DATA AND METHODS

We rely on multiple data sources to understand the experiences of Partnership schools, districts, and their communities, and the strategies districts employed for

teaching and learning during the pandemic. Drawing on these sources, we conduct descriptive analyses to examine differences between Partnership and non-Partnership communities, districts, and schools.

COVID-19 Transmission and Death Rates

We rely on publicly available COVID-19 confirmed case and death counts from the Michigan Department of Health and Human Services (MDHHS) for all 83 counties in Michigan, 11 of which are home to Partnership districts, to understand how the pandemic may have differentially affected Partnership districts in terms of health outcomes.³ We convert these case and death counts to rates per 100,000 using 2019 county population estimates from the U.S. Census Bureau American Community Survey and then calculate seven-day rolling averages for each day in order to account for county reporting idiosyncrasies. We use data from March 1, 2020, through June 14, 2021, approximately the end of the 2020-21 school year. For each county, we also calculate the cumulative confirmed case and death rates per 100,000 as a measure of the cumulative toll over the same period. Because case and death data are reported at the county level, we assign county-level values to districts and then calculate means for Partnership and non-Partnership districts, weighted by district size. As a result, the means can be interpreted as representing the experience of the average student in a Partnership or non-Partnership district.

District Plans for Instructional Modality

To understand differences in instructional modality, we rely on data from Extended COVID-19 Learning (ECOL) plans, which Michigan districts were required to submit monthly for the duration of the 2020-21 school year. Each month, the state received ECOL plans from between 808 and 814 of 814 applicable school districts, including all Partnership districts in each month. In these plans, districts reported whether they planned to provide instruction fully in-person, fully remote, or in a hybrid format.⁴

We conduct two descriptive analyses using the ECOL data to examine (1) district offerings, and (2) estimated take-up of those offerings. To assess the extent to which districts offered different modalities over time, we create three mutually exclusive categories for each district in each month from September 2020 through May 2021. The first category, “in-person option,” classifies districts that have any students attending fully in person. The second, “hybrid,” classifies districts without a fully in-person option that have any students attending under a hybrid model, in which they attend in-person for part of the week and remotely for part of the week. The final category, “fully remote,” identifies districts in which all students attend remotely each day. We exclude districts that operated virtually (i.e., fully remote) before the pandemic, including one Partnership district. We then compare the percentages of Partnership districts and non-Partnership districts offering each of the three modalities.

While the first analysis examines the share of districts providing each modality, the second estimates the share of Partnership and non-Partnership district *students* that received instruction in each modality. To conduct this analysis, we draw from a question that asked districts to specify the approximate percentage of students receiving each modality each month, with range options of less than 25%, 25-49%, 50-74%, 75-99%, and 100%. We combine responses to this question with district-level student enrollment to estimate the share of all Partnership and non-Partnership students that received each instructional modality. Specifically, for each district, we calculate the number of students that would have received a given mode of instruction under both the low- and high-end assumption based on the district ECOL report (e.g., if the district respondent selected 25-49% then the low end for that modality would be 25% and the high end would be 49%) by multiplying the low and high end values by district enrollment. We then provide monthly ranges representing the estimated share of students across all Partnership and non-Partnership districts, respectively, participating in each instructional modality.

Teacher and Principal Surveys

Over three years of a larger evaluation of the Partnership Model (2018-19 through 2020-21), we administered annual online surveys to all principals and teachers in Partnership districts. The survey window for the third wave, in which we asked questions specific to educators' perceptions of and experiences with schooling during the COVID-19 pandemic, was between February and early March of 2021. The two survey waves prior to the pandemic were administered from November through December of 2018 and 2019, respectively. To identify the population of teachers and principals in Partnership districts, we drew from statewide administrative data identifying all school and district employees. Teacher response rates were 38% in the first year, 49% in the second, and 39% in the third. Principal response rates were 29%, 38%, and 47%, respectively, over the three years (See Appendix Table A-1 for a breakdown of response rates by survey wave and Partnership status). While there are some observable differences between respondents and nonrespondents, all differences are less than the What Works Clearinghouse 0.25 standard deviation threshold for baseline differences in cases where researchers apply statistical corrections as we do (Appendix Table A-2).⁵ In total, over the three survey waves, we sent 19,738 surveys to eligible teachers and 765 to eligible principals. In total, we received 8,284 teacher and 285 principal responses.

Although the surveys covered many topic areas, we focus in this study on questions related to perceptions of pandemic-related challenges and on schoolwide factors that research suggests may have been influenced by the pandemic. The former category of questions provides a snapshot in time of educator perceptions in February and early March 2021. The latter category provides a comparison over three years of educator perceptions of factors relevant to school and district improvement. We focus on four pandemic-related questions. One, on both the teacher and principal surveys, asked

educators to estimate the share of students with immediate and other family members who contracted COVID-19, with response options of <10%, 10-25%, 26-50%, 51-75%, 76-90%, and >90%. A second question asked teachers and principals to estimate the share of students who were absent each day, with the same ranges as response options.

A question to teachers only asked about the extent to which a variety of conditions presented a challenge for their students that year, and included categories such as access to health care, homelessness or housing instability, food insecurity, having a parent or guardian who is a frontline worker, parent or guardian job loss, students taking on new childcare responsibilities, mental health, and access to mental health care. Response options were “not a challenge,” “a minimal challenge,” “a moderate challenge,” “a major challenge,” and “the greatest challenge.” Finally, the fourth pandemic-related question asked teachers about the extent to which they agreed that their students had a variety of at-home resources necessary for remote learning, including a quiet place to learn with reliable heat and electricity, parents or guardians who can assist, reliable internet, non-technology resources such as paper and pencils, and tech devices. Response options followed a five-point Likert scale from strongly disagree to strongly agree. While some of these items ask implicitly about changes (e.g., job loss, new childcare responsibilities), responses reflect a snapshot in time rather than the effect of the pandemic and we are unable to measure differences from a pre-pandemic time period. We therefore urge caution in interpreting responses as the pandemic’s direct effects. Rather, responses reflect a combination of pre-existing challenges and the effect of the pandemic.

Where possible, we also draw from three question items that were asked in each year of the survey to better understand the extent to which conditions in Partnership schools and districts changed since the pandemic. The first, which asked teachers and principals about their perceptions that students were enthusiastic to learn, came from a larger bank of items about school climate and culture in which response options followed a five-point Likert scale from strongly disagree to strongly agree. Two others came from a question that asked both teachers and principals to indicate the extent to which they believed a variety of factors were hindrances to school improvement. Response options were “not a hindrance,” “a slight hindrance,” “a moderate hindrance,” “a great hindrance,” or “the greatest hindrance.” Finally, to understand perceptions of the role of resources in improvement efforts over time, we draw from a question asking about the extent to which they agree that they have the resources they need to achieve improvement goals and again offer response options on a five-point Likert scale from strongly disagree to strongly agree.

In all analyses, we weight teacher and principal responses separately by year using sampling and nonresponse weights. We calculate the sampling weight using the school-level coverage of our sampling frame and calculate the nonresponse weight as the inverse probability of response based on demographic characteristics (race/ethnicity, gender) for both teachers and principals, and certification type (i.e., elementary, secondary) for teachers. While these weights will help to mitigate bias

stemming from survey nonresponse, it is important to note that weighting will only address bias related to the variables that contribute to our weights. There may be additional unobserved differences between respondents and nonrespondents that may affect results. To the extent that these differences affect Partnership and non-Partnership schools equally, the differences we find in our analyses comparing Partnership and non-Partnership schools will not be biased. However, overall results in which we report Partnership district averages in particular should be interpreted with the understanding that we cannot account for unobserved selection bias among our pool of survey respondents.

We analyze survey responses using item-level descriptive statistics and present weighted means and distributions of all teachers across Partnership districts. Where teacher and principal responses meaningfully differ, we provide principal responses alongside teacher data. To better understand the extent to which disadvantage is further concentrated within Partnership schools slated for turnaround, we run hypothesis tests comparing responses from Partnership school teachers with those from non-Partnership school teachers in Partnership districts and highlight significant and meaningful differences in the text. For question items we observe over time, we dichotomize responses (e.g., to 1 for strongly agree or agree, 0 for all other responses) and plot annual means for educators in Partnership and non-Partnership schools, respectively, in Partnership districts.

Where relevant, we also draw on these items to create constructs using exploratory factor analyses (EFA). We determine the number of factors based on the items using parallel analysis (Horn, 1965), and use orthogonal varimax rotation to identify the separate factors.^{6,7} Drawing from the EFA, we run confirmatory factor analyses (CFA) and generate factor scores for each respondent. We create three constructs—student socioeconomic challenges, Student at-home resources and supports, and educator resources and capacity—with Cronbach’s alphas ranging from 0.73 to 0.83 (Factor loadings and alphas are provided in Appendix Table A-3). Using those factor scores, we run simple mean comparisons between teachers in Partnership schools and non-Partnership schools in Partnership districts.⁸

Benchmark Assessments

Michigan required all school districts to administer approved math and reading benchmark assessments to all K-8 students in fall 2020 and spring 2021. Twenty-three of the 26 districts under Partnership during the 2021-22 school year made assessment data available through the Michigan Data Hub.⁹ Of those 23 Partnership districts, 19 used NWEA’s MAP Growth assessments and four used Curriculum Associates’ i-Ready assessments. We focus specifically on grades 3–8 to reduce bias arising from parental help that evidence suggests may have occurred frequently in early grades in fall in particular when many districts were operating remotely (Kilbride, Hopkins, Strunk, et al., 2021).

We draw from district-by-grade-by-subject mean scale scores and convert these mean scale scores to standard deviation units using student-level means and standard deviations within grade, subject, assessment (i.e., MAP or i-Ready), and timepoint (i.e., fall or spring). We run separate analyses for the two assessments because although the two assessments measure similar constructs, they cover slightly different content and use different scales. There are also differences in the districts that used each assessment,¹⁰ so stacking the assessments would involve inaccurately assuming that the mean MAP district was equivalent to the mean i-Ready district.

For each of the two timepoints (i.e., fall and spring of the 2020-21 school year), we calculate the mean of the district-by-grade-by-subject standardized means for Partnership districts in math and ELA, respectively, on the MAP and i-Ready assessments separately. Because we standardize scores, the mean values we calculate for Partnership districts represent the extent to which the average Partnership district fared differently than the state average. These analyses are descriptive in nature due to the limitations stemming from having only post-pandemic and district-level data. However, they provide important context on achievement levels of Partnership districts fall 2020 and the extent to which student learning in Partnership districts differed from the state average.

FINDINGS

How Did Partnership Districts and Their Communities Experience Health, Socioeconomic, and Mental Health Outcomes During the Pandemic and How did These Experiences Vary by Partnership School Status?

Health Outcomes

The COVID-19 pandemic struck Partnership communities especially hard in the early days of the pandemic. Figure 1 illustrates the stark differences in viral spread and health outcomes between Partnership and non-Partnership communities in the earliest phase of the pandemic, with confirmed cases in Panel A and confirmed deaths in Panel B. At the height of the first wave, Partnership communities were experiencing twice as many cases and deaths per 100,000 residents as non-Partnership communities, with 24 cases in early April 2020 and 2.8 deaths in mid-April 2020 per 100,000 residents. Although in the second wave of the pandemic, cases and deaths in non-Partnership communities slightly exceeded those in Partnership communities, by the third wave, in spring 2021, the pattern reverted back and Partnership communities again were experiencing higher case and death rates.

FIGURE 1

Table 2, Panel A, shows that by the end of the 2020-21 school year, Partnership communities had suffered greater health consequences from the pandemic than non-Partnership communities, with more than 9,000 cases per 100,000 residents—nearly 5% higher than the approximately 8,600 in non-Partnership communities. The discrepancy in deaths was starker, with 244 people per 100,000 residents of Partnership communities dying, 28% more than the 191 in non-Partnership communities. By dividing the death rate by the case rate, we can also estimate the percent of confirmed cases that ended in death. Approximately 2.7% of confirmed cases resulted in death in Partnership communities relative to 2.2% of cases in non-Partnership communities. This is likely attributable to other factors that speak to the inequitable differences in conditions between communities, including health disparities (e.g., health insurance, access to high quality health care) and economic conditions (e.g., ability to take off work).

TABLE 2

These high rates of community spread and disparate COVID-19 deaths permeated the experiences of educators and students in Partnership districts—and even more starkly, Partnership schools in those districts. Panel B of Table 2 shows that teachers in Partnership districts—and especially in Partnership *schools* in those districts—reported that a large share of students had family members who had contracted COVID-19 in the first year of the pandemic, a time when white-collar workers were more able to work from home and evade infection. In particular, teachers in Partnership schools estimated that about 25–41% of their students had immediate family members and about 31–48% had non-immediate family members who contracted COVID-19 as of February or March of 2021. The difference in teacher reports between Partnership and non-Partnership schools in Partnership districts was small but statistically significant—with non-Partnership schools teachers estimating that 21–38% had immediate family and 27–45% had other family members who contracted COVID-19 by that time period. Together, these findings highlight that students in Partnership districts grappled with substantial health concerns as a result of COVID-19—and that county-level case and death rates may even understate COVID-19 conditions for students in Partnership districts, where educators estimated that an especially large share of their students had family members who contracted COVID-19 in the first year of the pandemic. In turn, significant differences in teacher perception data suggest that conditions for students in Partnership schools—the very lowest performing schools in the districts and the schools that were explicitly targeted for turnaround prior to the pandemic—were likely even more challenging.

Socioeconomic Challenges

As the pandemic undercut public health, it also introduced new socioeconomic challenges for students and families—especially those in Partnership schools and districts who were already grappling with substantial economic disadvantage prior to the pandemic. Figure 2, Panel A, provides teacher responses to items asked about

students' socioeconomic challenges. The bottom two bars show that teachers believed the most salient socioeconomic challenges for their students were new child care responsibilities and parent or guardian job loss. Specifically, more than 70% of teachers across Partnership districts reported that these were “a major challenge” or “the greatest challenge” for their students in the classroom during the 2020-21 school year. About 60% reported that having a parent or guardian as a frontline worker during the pandemic was a major or the greatest challenge for their students. Additionally, teachers reported that high proportions of their students faced substantial challenges regarding food insecurity (59% reporting a major or the greatest challenge), homelessness or housing instability (44%), and access to health care (39%), though at least some portion of the challenges in this latter group of items would have predated the pandemic. Notably, very few teachers believed that these factors were not a challenge for their students.

FIGURE 2

Panel B shows that teachers in Partnership schools perceived that their students faced descriptively greater challenges than their peers in non-Partnership schools in Partnership districts, again underscoring the especially salient socioeconomic challenges in turnaround schools in particular. Though not shown here, while the difference between Partnership and non-Partnership schools in Partnership districts for the full construct is not statistically significant at conventional levels, we do find that Partnership school teachers perceive greater student challenges related to homelessness, having a parent or guardian who is a frontline worker, and the student taking on new childcare responsibilities. It is also important to note that non-Partnership schools in Partnership districts are substantially more disadvantaged than other schools in the state, as we show in Table 1 above; differences between Partnership schools and districts and the rest of the state are likely even more pronounced.

Mental Health

Perhaps unsurprisingly given the data discussed above, mental health emerged as a salient challenge for students in Partnership districts. Though not shown here, educators in Partnership districts estimated that 47–63% of their students experienced socioemotional trauma as a result of COVID-19. In turn, teachers believed that mental health and mental health care were major challenges for their students during the pandemic. Figure 3 shows the distribution of responses to two question items about mental health challenges—first for all teachers in Partnership districts, then for Partnership school teachers only, and finally for non-Partnership school teachers in Partnership districts. Nearly two-thirds of teachers in Partnership districts said mental health and access to mental health care was a major or the greatest challenge for their students during the 2020-21 school year. The far majority—more than 80%—said these were moderate challenges or greater. Here, we do not find significant differences between Partnership and non-Partnership schools in Partnership districts.

FIGURE 3

In summary, the pandemic wrought outsized health effects on Partnership communities, and especially in Partnership schools and districts, which were identified as needing support before the pandemic struck. In Partnership districts and especially Partnership schools, educators perceived that a substantial share of their students had family members who contracted the virus within the first year COVID-19 was first detected in the United States, suggesting that health challenges were even more pronounced in Partnership schools and districts than in the rest of the state. Socioeconomic challenges were also evident across Partnership districts, with exceptionally high shares of teachers reporting that their students grappled with new child care responsibilities and challenges associated with having parents working as frontline workers in particular. Perceptions of some of these challenges—in particular some that were pandemic-specific, such as having a parent who is a frontline worker and needing to take on new childcare responsibilities—were greater in Partnership schools than others in their districts, suggesting that schools previously targeted for turnaround faced uniquely challenging teaching and learning contexts during the pandemic. Across Partnership districts, as in the rest of the country, mental health and access to mental health care was a salient challenge for students.

How Did Partnership District Educators Experience Teaching and Learning During the Pandemic and How Did These Experiences Vary by Partnership School Status?

To better understand how student and community contexts may have spilled into the school building, in this section we examine four dimensions of teaching and learning during the pandemic: (1) instructional modality offered by districts and student take-up of modality options; (2) teacher perceptions of resources for teaching and learning; (3) student absenteeism; and (4) educator perceptions of student motivation and parent engagement.

Instructional Modality

Figure 4 provides the share of Partnership and non-Partnership districts, respectively, that offered each of three instructional modalities (in-person, remote, or hybrid) for each month of the 2020-21 school year, by Partnership district status. Partnership districts were about twice as likely as non-Partnership districts to begin the school year with fully remote instruction and less than half as likely to offer an in-person option. By December 2020, all but one Partnership district had shifted to fully remote, compared with just under 50% of non-Partnership districts. As districts moved away from remote-only instruction in spring 2021, Partnership districts relied on hybrid instruction even as non-Partnership districts reopened for fully in-person instruction. This finding is concerning because research shows that each additional month of remote schooling in Michigan during the pandemic was associated with a 1 percentage

point increase in the share of students scoring “significantly behind grade level” on state math assessments in spring 2021 (Kilbride, Hopkins, Strunk, et al., 2021).

FIGURE 4

Given the high rates of community spread in Partnership communities and the large share of Black residents, who national polls suggest were on average less comfortable returning to in-person schooling than parents of other races (Camp & Zamarro, 2022), it may be the case that Partnership districts remained remote longer because of parent preferences, rooted in the very real public health risks in communities with high case rates (Courtemanche et al., 2021; Goldhaber, Imberman, et al., 2022; Rauscher & Burns, 2021). Additionally, qualitative evidence from throughout Michigan has shown that district leaders made modality decisions in conversation with families in order to align decisions with local needs and preferences (Weddle et al., 2022). This was also the case in Partnership districts, where district leaders shared they collected preference data from families as they made monthly modality plans, and received consistent feedback that parents wanted remote instruction until they felt safe sending their students to school buildings (Strunk et al., 2021).¹¹ Figure 5 provides evidence on the take-up of instructional modality by Partnership district status, shedding light on these preferences. We provide four unique values for each modality: the percent of students offered each instructional modality (represented by the outermost light gray bars), the maximum estimated percentage of students receiving each modality (represented by the lightest shades within those bars), the minimum estimated percentage of students receiving each modality (represented by the middle shades), and the percentage of students who were not offered any other modes of instruction and therefore could not choose their learning modality (represented by the darkest shades).

The bars covering early fall 2020 and spring 2021—the time periods when more families in Partnership districts had non-remote options—illuminate the extent to which preferences varied between families in Partnership and non-Partnership districts. The first panel shows that a greater share of families in Partnership districts opted into fully remote instruction even when other options were available. By contrast, a lesser share of families in non-Partnership districts selected into fully remote options that were available to them. The second two panels show that as Partnership districts began to offer hybrid and in-person instruction, the share of Partnership district families choosing available hybrid options was greater than the share choosing available fully in-person options. In non-Partnership districts during the latter half of the 2020-21 school year, parents largely opted for fully in-person instruction. By the end of the school year, fewer than 20% of students in Partnership districts were estimated to be attending school fully in person compared with as many as 60% of students in non-Partnership districts. Together, these findings suggest that Partnership districts’ heavier reliance on remote instruction was aligned with family preferences. Regardless of reason for remote instruction, however, any negative consequences of remote instruction were likely to be more acutely felt in Partnership districts.

FIGURE 5

Resources for Teaching and Learning

Longer term reliance on remote schooling intensified existing resource gaps for students in Partnership schools and districts. Figure 6 provides Partnership district teacher responses to survey items related to the resources and supports students had at home. Here, we do not show Partnership and non-Partnership schools in those districts separately because there are no statistically or substantively significant differences between the two groups; both sets of teachers reported substantial gaps in student resources. Across Partnership districts, fewer than half of teachers agreed or strongly agreed that their students had access to any of the listed resources. Of each of the options, teachers were most likely to report that their students had the technology resources needed to learn (e.g., computers, software)—perhaps unsurprising given district efforts to provide technology devices (Hatch & Harbatkin, 2021). Still, just over 40% of teachers agreed or strongly agreed with this statement, and fewer (about 20%) believed their students had reliable internet access, highlighting the challenges that remained for students despite districts' investments to close the digital divide. Even fewer teachers believed their students had the non-technological resources (e.g., paper, pencils, subject specific tools such as lab materials, musical instruments) they needed to learn.

FIGURE 6

Teachers were least likely to agree and most likely to strongly disagree that their students had “a quiet, well-appointed place to learn with reliable electricity and heat at home”—an important ingredient for engaging in online learning— and only about 10% believed that their students had “parents or guardians who can assist with classwork, assignments, and comprehension as needed.”

A second dimension of resource availability involves the resources and capacity that teachers have for instruction. Figure 7, Panel A shows that across Partnership districts, only about 40% of teachers believed they had the data they needed to target instruction and the resources necessary to educate their students. By extension, only about 1 in 5 teachers said they were able to educate their students at least as well as in prior years. Panel B shows that here, teachers in Partnership schools actually reported having greater resources than their district peers in non-Partnership schools.

FIGURE 7

While we do not observe these items over time, a related but coarser question in each of the three study years provides some context for understanding how being designated as a turnaround school or district may have affected resource availability over time and during the pandemic and thus inform how conditions could change as schools and districts exit turnaround status and lose associated turnaround supports. Panel C shows teacher responses over time to a question asking about the extent to

which teachers agree that they have the resources needed to meet improvement goals. We find that in each year of data collection, fewer than half of teachers in both Partnership and non-Partnership schools in Partnership districts agreed that they had the resources they needed to meet improvement goals. However, the share of teachers agreeing grew in each year of the intervention, and grew at an even faster rate in 2020-21 than the prior year and in Partnership than non-Partnership schools in Partnership districts.¹² This suggests that the turnaround intervention may have been expanding resources for Partnership districts and especially Partnership schools in those districts in a way that teachers believed would be effective toward meeting turnaround goals and this growth continued during the pandemic year.

Student Absenteeism

Survey data suggest that student absenteeism was widespread in Partnership districts in the 2020-21 school year and that educators perceived student absenteeism to be a major challenge in their classrooms. Though not shown here, teachers across all schools in Partnership districts estimated that 23–41% of their students were absent each day. Estimates were substantively and significantly higher in Partnership schools, where teachers estimated that 27–46% of students were absent each day compared with 18–35% in non-Partnership schools within Partnership districts (the difference in distributions was statistically significant at $p < 0.001$). In turn, the vast majority of teachers in Partnership districts (86% of Partnership school teachers and 78% of non-Partnership school teachers in Partnership districts, $p < 0.001$) perceived that educating students who did not attend class was the greatest challenge or a major challenge in the classroom.

Student Motivation and Parent Engagement

A separate but related challenge for Partnership schools and districts was how to engage students and their families—a critical element of successful turnaround (Peck & Reitzug, 2018; Trujillo & Renee, 2012). The three panels of Figure 8 show responses to question items about student enthusiasm to learn, lack of student motivation as a hindrance to improvement, and lack of parent engagement as a hindrance to improvement, respectively, over time. We show these for teachers and principals separately in Partnership schools (round markers connected by solid lines) and non-Partnership schools in Partnership districts (square markers connected by dashed lines).

Panel A of Figure 8 shows that even prior to the pandemic, educators in Partnership districts were reporting relatively low student enthusiasm to learn, especially in Partnership schools—and perceptions in both sets of schools deteriorated sharply during the 2020-21 school year. This decline was especially pronounced among principals' reports, who previously tended to perceive higher student enthusiasm than teachers. The steepest drops were among principals in Partnership schools, though their perceptions began to decline prior to the pandemic.

Panel B shows an analogous increase in perceptions of low student motivation as a hindrance to school improvement. Across all years, teachers in Partnership schools

were more likely than their district peers in non-Partnership schools to report that low student motivation was a hindrance to improvement. Principals were more sanguine prior to the pandemic, especially in Partnership schools. Then in 2020-21, teachers and principals across Partnership and non-Partnership schools in those districts converged, with about three-quarters reporting that low student motivation was a hindrance to their improvement efforts.

FIGURE 8

Finally, in addition to reporting challenges related to student motivation, educators perceived that low parent engagement was a growing hindrance to school improvement. Panel C follows similar patterns to Panel B, showing that Partnership school teachers consistently perceived greater hindrances than teachers in non-Partnership schools in Partnership districts and that all groups perceived that parent engagement became an even greater hindrance in 2020-21. The change was again steepest among principals' reports, and by 2020-21, about 60% of both teachers and principals in both Partnership and non-Partnership schools in their districts were reporting that low parent engagement was a great or the greatest hindrance to school improvement.

Together, these findings suggest that educators in Partnership districts struggled with student enthusiasm, student motivation, and parent engagement prior to the pandemic—especially in Partnership schools. The pandemic, in turn, appeared to exacerbate these challenges across Partnership districts, as educator perceptions were significantly more negative ($p < 0.001$ in all three comparisons) in spring 2021 than they were before the pandemic in fall 2019.

To What Extent Did Learning Gains in Partnership Districts Differ From the State Average During the Pandemic?

As might be expected given the ways in which steep challenges in Partnership communities permeated teaching and learning in schools, Partnership districts fared worse on math and reading benchmarks, on average, than non-Partnership districts. Figure 9 provides the Partnership district-by-grade mean standardized benchmark score in math and reading, respectively, for fall and spring of the 2020-21 school year. Because scores are standardized based on student-level standard deviations for the state, values below zero are interpreted as the number of standard deviations below the state average for a given timepoint on a given assessment. There are two main takeaways. First, Partnership districts started the 2020-21 school year far below the state average in both math and reading, with the most pronounced differences in math. Second, students in Partnership districts made slower gains during the 2020-21 school year than the state average, shown by the declining trendlines. Together, these findings show that, as expected, Partnership districts were performing substantially worse than the state average at the onset of the pandemic—and also that pre-

pandemic progress raising student achievement (Burns et al., 2023) stalled during the pandemic as Partnership districts lost ground relative to the rest of the state.

FIGURE 9

DISCUSSION AND CONCLUSION

Turnaround reforms like the Partnership Model are intended to improve school and district operations and increase student performance quickly and substantially. It is imperative that such reforms are successful; turnaround schools and districts, which are by definition the lowest performing schools and districts in each state, are home to disproportionately large shares of low-income students and underrepresented minorities. They serve communities that are themselves among the most disadvantaged in the country. Improving student outcomes in these schools and districts is critical if we hope to shrink the opportunity and achievement gaps that have long permeated America's public education system.

While there is some evidence that such initiatives have been successful in improving student outcomes, this kind of dramatic progress is difficult even in the best of circumstances, much less during and in the aftermath of a pandemic. Unfortunately, the communities that house turnaround schools and districts were also those most adversely impacted by the COVID-19 pandemic. While there is a growing body of research documenting the steep challenges for K-12 schools wrought by the pandemic, and some evidence addressing the disproportionate impact of the pandemic on low-income students and students of color, there has been less attention paid to the particular challenges experienced by the lowest performing turnaround schools and districts as they were expected to dramatically improve student performance amidst the pandemic. In this study, we aim to shed light on the ways in which students and educators in Michigan's turnaround schools and districts experienced the pandemic, and the extent to which students appeared to be learning against this backdrop.

Our findings paint a dire picture, showing that Partnership communities, districts, and especially schools experienced substantially greater adverse impacts of the pandemic than higher performing more affluent communities and districts. Perhaps the most obvious disparity is found in the data about COVID-19 spread in Partnership relative to other communities. Partnership communities suffered more cases (especially in the early days of the pandemic), more deaths, and disproportionately high death rates given their case rates. Accordingly, teachers reported that many of their students had family members who contracted COVID-19 in the early pandemic waves and these reported rates were highest in Partnership schools—the very lowest performing schools in Partnership districts and those that were explicitly targeted for turnaround.

Comparing our results with those from other surveys and studies highlights the disparate and inequitable realities Partnership communities faced relative to the

population on average across the country. For instance, the study that serves as the closest comparison to our own in terms of the direct health impacts of COVID but uses a national sample, the Understanding Coronavirus in America tracking survey, asked respondents to indicate how many family members and close friends they had and how many of those family members and close friends had been infected with the coronavirus. Respondents who took the Understanding Coronavirus in America survey during the Partnership survey administration window estimated that about 13–15% of their close friends and family had been infected with the virus.¹³ The substantially higher estimates by Partnership school and district educators combined with the severe community spread in Partnership districts shown above provide reason to be concerned that students in Partnership schools and districts were, indeed, more likely to personally experience the adverse health effects of the pandemic than students in less disadvantaged districts.

Students and families in Partnership communities also grappled with substantial economic and mental health hardships that inevitably affected educators' abilities to teach and students' abilities to learn during the 2020-21 school year. National survey data related to students' mental health during the pandemic reinforce the substantial mental health challenges students faced during the 2020-21 school year and again highlight the extent to which mental health was an even greater challenge for students in Partnership districts. Our data show that 63% of teachers in Partnership districts reported that mental health was a major or "the greatest" challenge for students during the 2020-21 school year. By comparison, a poll administered to a national sample of children ages 13-17 in late February 2021 found that 51% reported worse personal mental health than prior to the pandemic (Morning Consult & EdChoice, 2021). A U.S. Centers for Disease Control (CDC) report based on a NORC survey administered in fall 2020 to a nationally representative survey of households with children ages 5-12 found that 22% of parents reported that their children experienced worse mental health due to the pandemic (Verlenden et al., 2021).¹⁴ Together, these figures underscore that mental health was a salient challenge for students across the country, and that mental health challenges among students in Partnership districts were especially stark.

These external-to-school factors necessarily seeped into Partnership districts, schools, and classrooms. Partnership districts responded to high community transmission rates by remaining fully remote much further into the 2020-21 school year than higher performing districts, but lacked sufficient resources to effectively close resource gaps as their students were learning from home. Student absenteeism was exceedingly high in Partnership districts and Partnership schools in particular during remote instruction, and educators perceived critical challenges related to student motivation and parent engagement—central pillars of successful turnaround. Nationally representative data again highlight the extent to which the pandemic appeared to create greater opportunity gaps in Partnership schools and districts than elsewhere. For instance, we find that Partnership district teachers estimated that 23–41% of their students were absent each day, and 82% reported that educating students who were

not in attendance was a major or the greatest challenge in the classroom during the 2020-21 school year. In Partnership schools, the schools that were tasked with meeting explicit performance goals during the pandemic, these figures were even higher, with teachers estimating that 27–46% of students were absent each day and 86% reporting student absenteeism was a major or the greatest challenge. A RAND study conducted in the spring of 2021 asked teachers what share of their students were absent “on most school days per week over the past month,” and 91% reported between 0 and 25% (Kaufman et al., 2021). Eighty-three percent of teachers in the RAND study estimated that between 0 and 25% of students were absent “1-2 days per week over the past month”—far lower than Partnership district teachers’ estimates.

Meanwhile, district achievement in Partnership districts as measured by benchmark assessments declined relative to the statewide average—underscoring that these turnaround districts were losing rather than gaining ground during a period when they were tasked with rapid and dramatic improvement.

While our study examines only the low-performing turnaround schools and districts in one state—Michigan—our results are likely generalizable to similar schools, districts, and communities across the country. The socioeconomic and population characteristics of Michigan’s Partnership districts are similar to those in other states’ low-performing and turnaround districts, and the disparities between Michigan’s Partnership and non-Partnership schools and districts reflect differences across the nation (Corallo & McDonald, 2001; Harris, 2007; Reardon, 2016; Strunk et al., 2020). Therefore, the pandemic-era difficulties we document in Partnership schools and districts will likely be the same as in other turnaround contexts across the country, with the same immediate impacts on teaching and learning that are likely to lead to longer-term consequences for the ability of these schools and districts to continue on their improvement trajectories.

These findings, then, should serve as a caution for policymakers and stakeholders expecting to see dramatic turnaround improvements in low-performing schools and districts in the years coming out of the pandemic. Although the Partnership Model was showing early signs of effectiveness in improving student achievement, especially for Partnership schools’ lowest performing students, prior to the pandemic, the pandemic’s effects will make it challenging for these schools, districts, and students to return to a pre-pandemic “normal,” much less an acceleration of the type expected of turnaround interventions.

Policymakers will therefore need to adjust accountability policies to take into consideration how to support and evaluate school performance within this new context. While it will be tempting to return to “business as usual,” setting achievement growth targets and holding schools and districts to meeting them, our results make clear that turnaround schools and districts may not be able to reach those targets at the pace that is expected of them. Partnership students and their communities have suffered great

losses, with consequences for their physical, mental, and economic health, as well as their learning over the course of the pandemic. It will therefore be necessary for policymakers to understand the immense challenges facing turnaround schools and districts in the aftermath of the pandemic so that they can allocate supports and resources in ways that enable students to recover academically, physically, and socioemotionally. In particular, policymakers will need to provide sufficient and ongoing funding to enable low-performing turnaround districts like Partnership districts to purchase necessary intervention tools (e.g., curriculum, Tier I and II programs), technology, and infrastructure upgrades to allow for students' safe return to school buildings. In addition, turnaround districts will need resources and supports to effectively recruit and retain educators as teachers and principals appear to be exiting low-performing schools and districts at higher rates (Hatch & Harbatkin, 2021).

In sum, schools and districts undergoing turnaround reforms prior to the pandemic were already those that needed the most support and assistance, and the pandemic has only exacerbated and added to the challenges they were facing. Low-performing schools and districts are now working to make dramatic improvements to student achievement after more than a year of interrupted learning and within the context of new and exacerbated health, mental health, socioemotional, and economic challenges. Pandemic recovery efforts—especially those targeting improvement in low-performing schools and districts—will need to acknowledge the outsized toll the pandemic has taken on the students and educators teaching and learning in turnaround districts, and on the communities these districts serve. With this in mind, policymakers at the national, state, and local levels can design interventions and provide resources intended to support these districts, helping them to rebuild capacity so they can in turn support their students and the communities in which they live.

ENDNOTES

¹ On the 2022 NAEP, Michigan ranked 36th nationally in fourth-grade math, 26th in eighth-grade math, 43rd in fourth-grade reading, and 32nd in eighth-grade reading.

² While the Partnership Model was originally intended to be implemented over a three-year period, the first two cohorts of Partnership districts agreed to remain under Partnership through 2021-22 in order to continue receiving supports from the Office of Partnership Districts and additional state funds for turnaround. Cohort 1 schools and their districts therefore remained under Partnership Agreements for five years while Cohort 2 schools and districts remained for four.

³ We also analyzed positivity rates and found they followed the same patterns as case rates.

⁴ Hopkins et al. (2021) provides a comprehensive analysis of statewide ECOL plans.

⁵ Teacher respondents are slightly more likely than non-respondents to be White, female, secondary certified, and new to the district, and less likely to be Black and elementary certified. We find no significant differences between principal respondents and non-respondents, and in both cases all differences are less than 0.25 standard deviations.

⁶ We also ran the EFAs separately for Partnership and non-Partnership schools and compared the loadings to ensure subsequent comparisons were based on a construct with similar meanings across the two groups.

⁷ We ultimately used principal components factors but also ran analyses using principal factors and polychoric PCA, the latter of which accounts more flexibly for the non-normal distribution of responses on our five-point scales. The three approaches yielded highly correlated factor (or component, in the case of the polychoric PCA) loadings and analyses drawing on these loadings yielded highly similar results.

⁸ Findings based on survey questions are subject to educator perceptions and may be biased by either the sample of educators who chose to respond or even the sample of educators who work in low-performing turnaround districts. For example, because teachers in turnaround schools and districts tend to have less experience than teachers in other districts, it is possible that they perceive challenges more intensely than their peers in non-turnaround schools and districts. While these differences in perceptions could affect survey findings, we believe that our triangulation of multiple data sources, including administrative data that would not be subject to the same type of bias, helps to support our conclusions.

⁹ Please see <https://epicedpolicy.org/michigans-2020-21-benchmark-assessments/> for more information about benchmark data availability.

¹⁰ For example, districts using i-Ready enrolled a greater share of Black students and English learners and a lesser share of White students than the state on average, while districts using MAP enrolled a greater share of special education students than the state on average (Kilbride, Hopkins, & Strunk, 2021).

¹¹ It is also possible that districts made decisions based on funding and resources. However, as Title 1 schools, Partnership schools received more pandemic relief formula funding than others, and Partnership districts also continued to receive turnaround funding. In total, Partnership districts were receiving more funding than in previous years during this period (Strunk et al., 2021). Thus, Partnership districts likely could have had the resources needed to implement in-person learning if it were a priority.

¹² A simple linear model regressing responses to the resource question on year indicators shows a growing and statistically significant change from 2018-19 to each

of the subsequent years. A model regressing these responses on year indicators interacted with Partnership school indicators shows that these changes from baseline are significantly larger in Partnership schools. Regression results are shown in Appendix Table A-4.

¹³ A one-to-one comparison between the Partnership survey and national survey is not possible for several reasons—perhaps most importantly, the surveys asked about different populations (immediate and other family vs. family and close friend), and asked the questions to different populations (asking educators about their students' families vs. asking individuals about their own families and friends). However, the national survey does provide some context for interpreting the Partnership district data.

¹⁴ Again, we note that these national surveys were administered to children and parents, respectively, rather than teachers.

REFERENCES

- Adams, G., & Todd, M. (2020). *Meeting the school-age child care needs of working parents facing COVID-19 distance learning: Policy options to consider* (No. ED610005). ERIC. <https://files.eric.ed.gov/fulltext/ED610005.pdf>
- Adelman, H. S., & Taylor, L. (2007). Systemic Change for School Improvement. *Journal of Educational and Psychological Consultation*, 17(1), 55–77. <https://doi.org/10.1080/10474410709336590>
- Adhikari, S., Pantaleo, N. P., Feldman, J. M., Ogedegbe, O., Thorpe, L., & Troxel, A. B. (2020). Assessment of Community-Level Disparities in Coronavirus Disease 2019 (COVID-19) Infections and Deaths in Large US Metropolitan Areas. *JAMA Network Open*, 3(7), e2016938. <https://doi.org/10.1001/jamanetworkopen.2020.16938>
- Agostinelli, F., Doepke, M., Sorrenti, G., & Zilibotti, F. (2022). When the great equalizer shuts down: Schools, peers, and parents in pandemic times. *Journal of Public Economics*, 206, 1–49. <https://doi.org/10.1016/j.jpubeco.2021.104574>
- Aladjem, D. K., Birman, B. F., Orland, M., Harr-Robins, J., Heredia, A., Parrish, T. B., & Ruffini, S. J. (2010). *Achieving dramatic school improvement: An exploratory study* (No. ED526783). ERIC. <https://files.eric.ed.gov/fulltext/ED526783.pdf>
- Ali, U., Herbst, C. M., & Makridis, C. A. (2021). The impact of COVID-19 on the U.S. child care market: Evidence from stay-at-home orders. *Economics of Education Review*, 82, 1–13. <https://doi.org/10.1016/j.econedurev.2021.102094>
- Bacher-Hicks, A., Goodman, J., & Mulhern, C. (2021). Inequality in household adaptation to schooling shocks: Covid-induced online learning engagement in real time. *Journal of Public Economics*, 193, 104345. <https://doi.org/10.1016/j.jpubeco.2020.104345>
- Béland, L.-P., Brodeur, A., & Wright, T. (2020). *The short-term economic consequences of COVID-19: Exposure to disease, remote work and government response* (SSRN Scholarly Paper ID 3584922). Social Science Research Network. <https://doi.org/10.2139/ssrn.3584922>
- Besecker, M., & Thomas, A. (2020). *Student Engagement Online During School Facilities Closures: An Analysis of L.A. Unified Secondary Students' Schoology Activity from March 16 to May 22, 2020*. Los Angeles Unified School District Independent Analysis Unit. <http://laschoolboard.org/sites/default/files/IAU%20Report%202020%200707%20-%20Student%20Engagement%20Online%20During%20Closures.pdf>
- Betebenner, D., Van Iwaarden, A., Cooperman, A., Boyer, M., & Dadey, N. (2021). *Assessing the Academic Impact of COVID-19 in Summer 2021*.

<https://www.nciea.org/blog/covid-19-disruptions/assessing-academic-impact-covid-19-summer-2021>

Borman, G. D., Hewes, G. M., Overman, L. T., & Brown, S. (2003). Comprehensive School Reform and Achievement: A Meta-Analysis. *Review of Educational Research*, 73(2), 125–230. <https://doi.org/10.3102/00346543073002125>

Boyd, D., Lankford, H., Loeb, S., & Wyckoff, J. (2005). Explaining the short careers of high-achieving teachers in schools with low-performing students. *American Economic Review*, 95(2), 166–171.

Burns, J., Harbatkin, E., Strunk, K. O., Torres, C., Mcilwain, A., & Frost Waldron, S. (2023). The efficacy and implementation of Michigan's Partnership Model of school and district turnaround: Mixed-methods evidence from the first 2 years of reform implementation. *Educational Evaluation and Policy Analysis*, 1–33. <https://doi.org/10.3102/01623737221141415>

Calarco, J. M., Meanwell, E., Anderson, E. M., & Knopf, A. S. (2021). By Default: How Mothers in Different-Sex Dual-Earner Couples Account for Inequalities in Pandemic Parenting. *Socius*, 7, 23780231211038784. <https://doi.org/10.1177/23780231211038783>

Camp, A. M., & Zamarro, G. (2022). Determinants of ethnic differences in school modality choices during the COVID-19 crisis. *Educational Researcher*, 51(1), 6–16. <https://doi.org/10.3102/0013189X211057562>

Center on Reinventing Public Education. (2020). *Fall 2020: The state of school reopening*. <https://www.crpe.org/current-research/covid-19-school-closures>

Ceron, E. (2021, December 22). Food Insecurity Reaches Five Month High as Child Tax Credit Payments End. *Bloomberg*. <https://www.bloomberg.com/news/articles/2021-12-22/food-insecurity-reaches-five-month-high-as-child-tax-credit-payments-end>

Chan, M., Sharkey, J. D., Lawrie, S. I., Arch, D. A. N., & Nylund-Gibson, K. (2021). Elementary school teacher well-being and supportive measures amid COVID-19: An exploratory study. *School Psychology*, 36(6), 533–545. <https://doi.org/10.1037/spq0000441>

Chetty, R., Friedman, J. N., Hendren, N., Stepner, M., & Team, T. O. I. (2020). *The economic impacts of COVID-19: Evidence from a new public database built using private sector data* (Working Paper No. 27431). National Bureau of Economic Research. <https://doi.org/10.3386/w27431>

Corallo, C., & McDonald, D. (2001). *What works with low-performing schools: A review of research literature on low-performing schools* (No. ED462737). ERIC. <https://files.eric.ed.gov/fulltext/ED462737.pdf>

- Courtemanche, C. J., Le, A. H., Yelowitz, A., & Zimmer, R. (2021). *School reopenings, mobility, and COVID-19 spread: Evidence from Texas* (Working Paper No. 28753). National Bureau of Economic Research. <http://www.nber.org/papers/w28753>
- Croda, E., & Grossbard, S. (2021). Women pay the price of COVID-19 more than men. *Review of Economics of the Household*, 19(1), 1–9. <https://doi.org/10.1007/s11150-021-09549-8>
- Cyrus, E., Clarke, R., Hadley, D., Bursac, Z., Trepka, M. J., Dévieux, J. G., Bagci, U., Furr-Holden, D., Coudray, M., Mariano, Y., Kiplagat, S., Noel, I., Ravelo, G., Paley, M., & Wagner, E. F. (2020). The Impact of COVID-19 on African American Communities in the United States. *Health Equity*, 4(1), 476–483. <https://doi.org/10.1089/heq.2020.0030>
- Darling-Hammond, L., Schachner, A., Edgerton, A., Badrinarayan, A., Cardichon, J., Cookson Jr., P. W., Griffith, M., Klevan, S., Maier, A., Martinez, M., Melnick, H., Truong, N., & Wojcikiewicz, S. (2020). *Restarting and Reinventing School: Learning in the Time of COVID and Beyond*. Learning Policy Institute. <http://learningpolicyinstitute.org/product/restarting-reinventing-school-covid>
- Desimone, L., & Garet, M. S. (2015). Best Practices in Teachers' Professional Development in the United States. *Psychology, Society & Education*, 7(3), 252–263.
- Domina, T., Renzulli, L., Murray, B., Garza, A. N., & Perez, L. (2021). Remote or removed: Predicting successful engagement with online learning during COVID-19. *Socius*, 7, 2378023120988200. <https://doi.org/10.1177/2378023120988200>
- Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E. (2020). *Mind the gap: COVID-19 is widening racial disparities in learning, so students need help and a chance to catch up* (pp. 1–12). McKinsey & Company. <https://www.mckinsey.com/industries/public-and-social-sector/our-insights/covid-19-and-learning-loss-disparities-grow-and-students-need-help>
- Dragoset, L., Thomas, J., Herrmann, M., Deke, J., James-Burdumy, S., & Lee Luca, D. (2019). The Impact of School Improvement Grants on Student Outcomes: Findings From a National Evaluation Using a Regression Discontinuity Design. *Journal of Research on Educational Effectiveness*, 12(2), 215–250. <https://doi.org/10.1080/19345747.2019.1571654>
- Engzell, P., Frey, A., & Verhagen, M. D. (2021). Learning loss due to school closures during the COVID-19 pandemic. *Proceedings of the National Academy of Sciences*, 118(17). <https://doi.org/10.1073/pnas.2022376118>
- Finch, W. H., & Hernández Finch, M. E. (2020). Poverty and Covid-19: Rates of Incidence and Deaths in the United States During the First 10 Weeks of the Pandemic. *Frontiers in Sociology*, 5. <https://www.frontiersin.org/article/10.3389/fsoc.2020.00047>

- Garbe, A., Ogurlu, U., Logan, N., & Cook, P. (2020). COVID-19 and Remote Learning: Experiences of Parents with Children during the Pandemic. *American Journal of Qualitative Research*, 4(3), 45–65. <https://doi.org/10.29333/ajqr/8471>
- Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38(4), 915–945. <https://doi.org/10.3102/00028312038004915>
- Goldhaber, D., Imberman, S. A., Strunk, K. O., Hopkins, B. G., Brown, N., Harbatkin, E., & Kilbride, T. (2022). To What Extent Does in-Person Schooling Contribute to the Spread of Covid-19? Evidence from Michigan and Washington. *Journal of Policy Analysis and Management*, 41(1), 318–349. <https://doi.org/10.1002/pam.22354>
- Goldhaber, D., Kane, T. J., McEachin, A., Morton, E., Patterson, T., & Staiger, D. O. (2022). *The consequences of remote and hybrid instruction during the pandemic* (Working Paper No. 30010). National Bureau of Economic Research. <https://doi.org/10.3386/w30010>
- Goldhaber, D., Quince, V., & Theobald, R. (2018). Has It Always Been This Way? Tracing the Evolution of Teacher Quality Gaps in U.S. Public Schools. *American Educational Research Journal*, 55(1), 171–201. <https://doi.org/10.3102/0002831217733445>
- Gross, C. P., Essien, U. R., Pasha, S., Gross, J. R., Wang, S., & Nunez-Smith, M. (2020). Racial and Ethnic Disparities in Population-Level Covid-19 Mortality. *Journal of General Internal Medicine*, 35(10), 3097–3099. <https://doi.org/10.1007/s11606-020-06081-w>
- 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*, 7, 23328584211041350. <https://doi.org/10.1177/23328584211041350>
- Halloran, C., Jack, R., Okun, J. C., & Oster, E. (2021). *Pandemic Schooling Mode and Student Test Scores: Evidence from US States* (Working Paper No. 29497). National Bureau of Economic Research. <https://doi.org/10.3386/w29497>
- Hamilton, L. S., Kaufman, J. H., & Diliberti, M. (2020). *Teaching and leading through a pandemic: Key findings from the American educator panels spring 2020 COVID-19 surveys* (pp. 1–16). https://www.rand.org/pubs/research_reports/RRA168-2.html
- Hanushek, E. A., Peterson, P. E., Talpey, L. M., & Woessmann, L. (2019). *The unwavering SES-achievement gap: Trends in U.S. student performance* (No. 606ED606000). ERIC. <https://files.eric.ed.gov/fulltext/ED606000.pdf>

- Harbatkin, E. (2022). Staffing for School Turnaround in Rural Settings. *Leadership and Policy in Schools*, 1–23. <https://doi.org/10.1080/15700763.2022.2058963>
- Hardy, B. L., & Logan, T. D. (2020). *Racial Economic Inequality Amid the COVID-19 Crisis* (No. 2020–17). Brookings Institution. https://www.brookings.edu/wp-content/uploads/2020/08/EA_HardyLogan_LO_8.12.pdf
- Harris, D. N. (2007). High-Flying Schools, Student Disadvantage, and the Logic of NCLB. *American Journal of Education*, 113(3), 367–394. <https://doi.org/10.1086/512737>
- Hatch, E., & Harbatkin, E. (2021). *COVID-19 and Michigan's Lowest Performing School*. Education Policy Innovation Collaborative. <https://epicedpolicy.org/covid-19-and-michigans-lowest-performing-schools/>
- Heissel, J. A., & Ladd, H. F. (2018). School turnaround in North Carolina: A regression discontinuity analysis. *Economics of Education Review*, 62, 302–320. <https://doi.org/10.1016/j.econedurev.2017.08.001>
- Henry, G. T., & Harbatkin, E. (2020). The next generation of state reforms to improve their lowest performing schools: An evaluation of North Carolina's school transformation intervention. *Journal of Research on Educational Effectiveness*, 13(4), 702–730. <https://doi.org/10.1080/19345747.2020.1814464>
- Henry, G. T., McNeill, S. M., & Harbatkin, E. (2022). Accountability-driven school reform: Are there unintended effects on younger children in untested grades? *Early Childhood Research Quarterly*, 61, 190–208. <https://doi.org/10.1016/j.ecresq.2022.07.005>
- Henry, G. T., Pham, L. D., Kho, A., & Zimmer, R. (2020). Peeking into the black box of school turnaround: A formal test of mediators and suppressors. *Educational Evaluation and Policy Analysis*, 42(2), 232–256. <https://doi.org/10.3102/0162373720908600>
- Herman, R., Dawson, P., Dee, T., Greene, J., Maynard, R., Redding, S., & Darwin, M. (2008). *Turning around chronically low-performing schools* (No. ED501241). ERIC. <https://eric.ed.gov/?id=ED501241>
- Hillis, S. D., Blenkinsop, A., Villaveces, A., Annor, F. B., Liburd, L., Massetti, G. M., Demissie, Z., Mercy, J. A., Nelson III, C. A., Cluver, L., Flaxman, S., Sherr, L., Donnelly, C. A., Ratmann, O., & Unwin, H. J. T. (2021). COVID-19–Associated Orphanhood and Caregiver Death in the United States. *Pediatrics*, 148(6), e2021053760. <https://doi.org/10.1542/peds.2021-053760>
- Hopkins, B., Kilbride, T., & Strunk, K. O. (2021). *Instructional delivery under Michigan districts' Extended COVID-19 Learning Plans*. Education Policy Innovation Collaborative. <https://epicedpolicy.org/ecol-reports/>

- Jacobson, L. (2021, September 16). Pandemic Testing Gaps Complicate Ability to Pinpoint Struggling Schools at a Time When Students Need Extra Help, School Leaders Say. *The 74 Million*. <https://www.the74million.org/article/pandemic-testing-gaps-complicate-ability-to-pinpoint-struggling-schools-at-a-time-when-students-need-extra-help-school-leaders-say/>
- Jang, H., & Reardon, S. F. (2019). States as sites of educational (in)equality: State contexts and the socioeconomic achievement gradient. *AERA Open*, 5(3), 2332858419872459. <https://doi.org/10.1177/2332858419872459>
- Karpman, M., Zuckerman, S., & Kenney, G. M. (2020). *Uneven recovery leaves many Hispanic, Black, and low-income adults struggling*. Urban Institute. <https://www.urban.org/research/publication/uneven-recovery-leaves-many-hispanic-black-and-low-income-adults-struggling>
- Kaufman, J. H., Diliberti, M. K., Hunter, G. P., Snoke, J., Grant, D., Setodji, C. M., & Young, C. J. (2021). *COVID-19 and the State of K-12 Schools: Results and Technical Documentation from the Spring 2021 American Educator Panels COVID-19 Surveys*. RAND Corporation. https://www.rand.org/pubs/research_reports/RRA168-7.html
- Kilbride, T., Hopkins, B., & Strunk, K. O. (2021). *Michigan's 2020-21 benchmark assessments*. Education Policy Innovation Collaborative. <https://epicedpolicy.org/michigans-2020-21-benchmark-assessments/>
- Kilbride, T., Hopkins, B., Strunk, K. O., & Imberman, S. (2021). *K-8 student achievement and achievement gaps on Michigan's 2020-21 benchmark and summative assessments*. Education Policy Innovation Collaborative. <https://epicedpolicy.org/k-8-student-achievement-and-achievement-gaps-on-michigans-2020-21-benchmark-and-summative-assessments/>
- Kim, L. E., Oxley, L., & Asbury, K. (2022). "My brain feels like a browser with 100 tabs open": A longitudinal study of teachers' mental health and well-being during the COVID-19 pandemic. *British Journal of Educational Psychology*, 92(1), e12450. <https://doi.org/10.1111/bjep.12450>
- Kogan, V., & Lavertu, S. (2021). *The COVID-19 pandemic and student achievement on Ohio's third-grade English language arts assessment*. Ohio State University John Glenn College of Public Affairs. http://glenn.osu.edu/educational-governance/reports/reports-attributes/ODE_ThirdGradeELA_KL_1-27-2021.pdf
- Kraft, M. A., Blazar, D., & Hogan, D. (2018). The effect of teacher coaching on instruction and achievement: A meta-analysis of the causal evidence. *Review of Educational Research*, 88(4), 547-588. <https://doi.org/10.3102/0034654318759268>
- Kraft, M. A., Simon, N. S., & Lyon, M. A. (2021). Sustaining a sense of success: The protective role of teacher working conditions during the COVID-19 pandemic.

Journal of Research on Educational Effectiveness, 14, 1–43.
<https://doi.org/10.1080/19345747.2021.1938314>

- Kuhfeld, M., Soland, J., & Lewis, K. (2022). *Test score patterns across three COVID-19-impacted school years* (EdWorkingPaper No. 22–521). Annenberg Institute at Brown University. <https://doi.org/10.26300/ga82-6v47>
- Lewis, K., Kuhfeld, M., Ruzek, E., & McEachin, A. (2021). *Learning during COVID-19: Reading and math achievement in the 2020-21 school year* (p. 12). Northwest Evaluation Association. <https://www.nwea.org/uploads/2021/07/Learning-during-COVID-19-Reading-and-math-achievement-in-the-2020-2021-school-year.research-brief-1.pdf>
- Malen, B., & Rice, J. K. (2016). School reconstitution as a turnaround strategy: An analysis of the evidence. In W. Matthis & T. Trujillo (Eds.), *Learning from the federal market-based reforms: Lessons for the Every Student Succeeds Act (ESSA)* (pp. 99–125). Information Age Publishing.
- Malkus, N. (2020, June 16). School districts' remote-learning plans may widen student achievement gap. *Education Next*. <https://www.educationnext.org/school-districts-remote-learning-plans-may-widen-student-achievement-gap-only-20-percent-meet-standards/>
- Marshall, D. T., & Bradley-Dorsey, M. (2020). Reopening America's Schools: A Descriptive Look at How States and Large School Districts are Navigating Fall 2020. *Journal of School Choice*, 14(4), 534–566. <https://doi.org/10.1080/15582159.2020.1822731>
- Marshall, D. T., Shannon, D. M., & Love, S. M. (2020). How teachers experienced the COVID-19 transition to remote instruction. *Phi Delta Kappan*, 102(3), 46–50. <https://doi.org/10.1177/0031721720970702>
- Meltzer, E. (2021, August 12). CMAS results: Colorado students lost ground during year of disrupted learning. *Chalkbeat Colorado*. <https://co.chalkbeat.org/2021/8/12/22621936/cmas-results-colorado-students-lost-ground-pandemic-remote-learning-covid-state-tests>
- Meyers, C. V. (2020). An Urban District's Struggle to Preserve School Turnaround Change. *Urban Education*, 0042085920966031. <https://doi.org/10.1177/0042085920966031>
- Montenovo, L., Jiang, X., Lozano Rojas, F., Schmutte, I. M., Simon, K. I., Weinberg, B. A., & Wing, C. (2020). *Determinants of Disparities in Covid-19 Job Losses* (Working Paper No. 27132; Working Paper Series). National Bureau of Economic Research. <https://doi.org/10.3386/w27132>
- Morning Consult & EdChoice. (2021). *Teens and K-12 Education*. <https://edchoice.morningconsultintelligence.com/assets/114947.pdf>

- Niles, M. T., Bertmann, F., Belarmino, E. H., Wentworth, T., Biehl, E., & Neff, R. (2020). The early food insecurity impacts of COVID-19. *Nutrients*, *12*(7), Article 7. <https://doi.org/10.3390/nu12072096>
- Papay, J., & Hannon, M. (2018, November 8). *The Effects of School Turnaround Strategies in Massachusetts*. 2018 APPAM Fall Research Conference: Evidence for Action: Encouraging Innovation and Improvement, Washington, D.C. <https://appam.confex.com/appam/2018/webprogram/Paper26237.html>
- Park, J. (2021). Who is hardest hit by a pandemic? Racial disparities in COVID-19 hardship in the U.S. *International Journal of Urban Sciences*, *25*(2), 149–177. <https://doi.org/10.1080/12265934.2021.1877566>
- Parolin, Z., & Lee, E. K. (2021). Large socio-economic, geographic and demographic disparities exist in exposure to school closures. *Nature Human Behaviour*, *5*(4), 522–528. <https://doi.org/10.1038/s41562-021-01087-8>
- Patrick, S. K., Grissom, J. A., Woods, S. C., & Newsome, U. W. (2021). Broadband Access, District Policy, and Student Opportunities for Remote Learning During COVID-19 School Closures. *AERA Open*, *7*, 23328584211064296. <https://doi.org/10.1177/23328584211064296>
- Peck, C., & Reitzug, U. C. (2018). Discount Stores, Discount(ed) Community? Parent and Family Engagement, Community Outreach, and an Urban Turnaround School. *Education and Urban Society*, *50*(8), 675–696. <https://doi.org/10.1177/0013124517713819>
- Pendola, A. (2022). Spending in Lean Times: School-Level Budget Allocations During the Great Recession in Texas. *Peabody Journal of Education*, *0*(0), 1–19. <https://doi.org/10.1080/0161956X.2022.2109913>
- Peurach, D. J., & Neumerski, C. M. (2015). Mixing metaphors: Building infrastructure for large scale school turnaround. *Journal of Educational Change*, *16*(4), 379–420. <https://doi.org/10.1007/s10833-015-9259-z>
- Pham, L. D. (2022). Why do we find these effects? An examination of mediating pathways explaining the effects of school turnaround. *Journal of Research on Educational Effectiveness*, 82–105. <https://doi.org/10.1080/19345747.2022.2081276>
- Pressley, T. (2021). Factors contributing to teacher burnout during COVID-19. *American Educational Research Journal*, *50*(5), 325–327. <https://doi.org/10.3102/0013189X211004138>
- Rabinovitz, J. (2016). Local education inequities across US revealed in new Stanford data set. Retrieved from Stanford News Website <http://News.Stanford.Edu/2016/04/29/Local-Education-Inequities-across-Us-Revealed-Newstanford-Data-Set>.

- Radey, M., Langenderfer-Magruder, L., & Brown Speights, J. (2021). "I don't have much of a choice": Low-income single mothers' COVID-19 school and care decisions. *Family Relations*, 70(5), 1312–1326. <https://doi.org/10.1111/fare.12593>
- Rauscher, E., & Burns, A. (2021). Unequal opportunity spreaders: Higher COVID-19 deaths with later school closure in the United States. *Sociological Perspectives*, 07311214211005486. <https://doi.org/10.1177/07311214211005486>
- Reardon, S. F. (2016). School district socioeconomic status, race, and academic achievement. *Stanford Center for Educational Policy Analysis*.
- Redding, C., & Nguyen, T. D. (2020). The relationship between school turnaround and student outcomes: A meta-analysis. *Educational Evaluation and Policy Analysis*, 41(4), 1–27. <https://doi.org/10.3102/0162373720949513>
- Sass, T., & Goldring, T. (2021). *Student achievement growth during the COVID-19 pandemic* (No. 9; GPL Reports). Georgia State University. https://scholarworks.gsu.edu/gpl_reports/9
- Schueler, B. E., Asher, C. A., Larned, K. E., Mehrotra, S., & Pollard, C. (2021). Improving low-performing schools: A meta-analysis of impact evaluation studies. *American Educational Research Journal*, 59(5), 975–1010. <https://doi.org/10.3102/00028312211060855>
- Sharma, S. V., Chuang, R.-J., Rushing, M., Naylor, B., Ranjit, N., Pomeroy, M., & Markham, C. (2020). Social Determinants of Health-Related Needs During COVID-19 Among Low-Income Households With Children. *Preventing Chronic Disease*, 17, E119. <https://doi.org/10.5888/pcd17.200322>
- Sharma, S. V., Haidar, A., Noyola, J., Tien, J., Rushing, M., Naylor, B. M., Chuang, R.-J., & Markham, C. (2020). Using a rapid assessment methodology to identify and address immediate needs among low-income households with children during COVID-19. *PLOS ONE*, 15(10), 1–11. <https://doi.org/10.1371/journal.pone.0240009>
- Shores, K., & Steinberg, M. P. (2019). Schooling during the Great Recession: Patterns of school spending and student achievement using population data. *AERA Open*, 5(3), 2332858419877431. <https://doi.org/10.1177/2332858419877431>
- Singer, J., & Cullum, S. (2023). *Michigan's Partnership schools: An analysis of Round 4 identification*. Education Policy Innovation Collaborative. <https://epicedpolicy.org/mi-partnership-schools-an-analysis-of-round-4-identification/>
- Strunk, K. O., Burns, J., Torres, C., McIlwain, A., Waldron Frost, S., & Harbatkin, E. (2020). *Partnership turnaround: Year two report*. Education Policy Innovation Collaborative. <https://epicedpolicy.org/partnership-turnaround-year-two-report/>

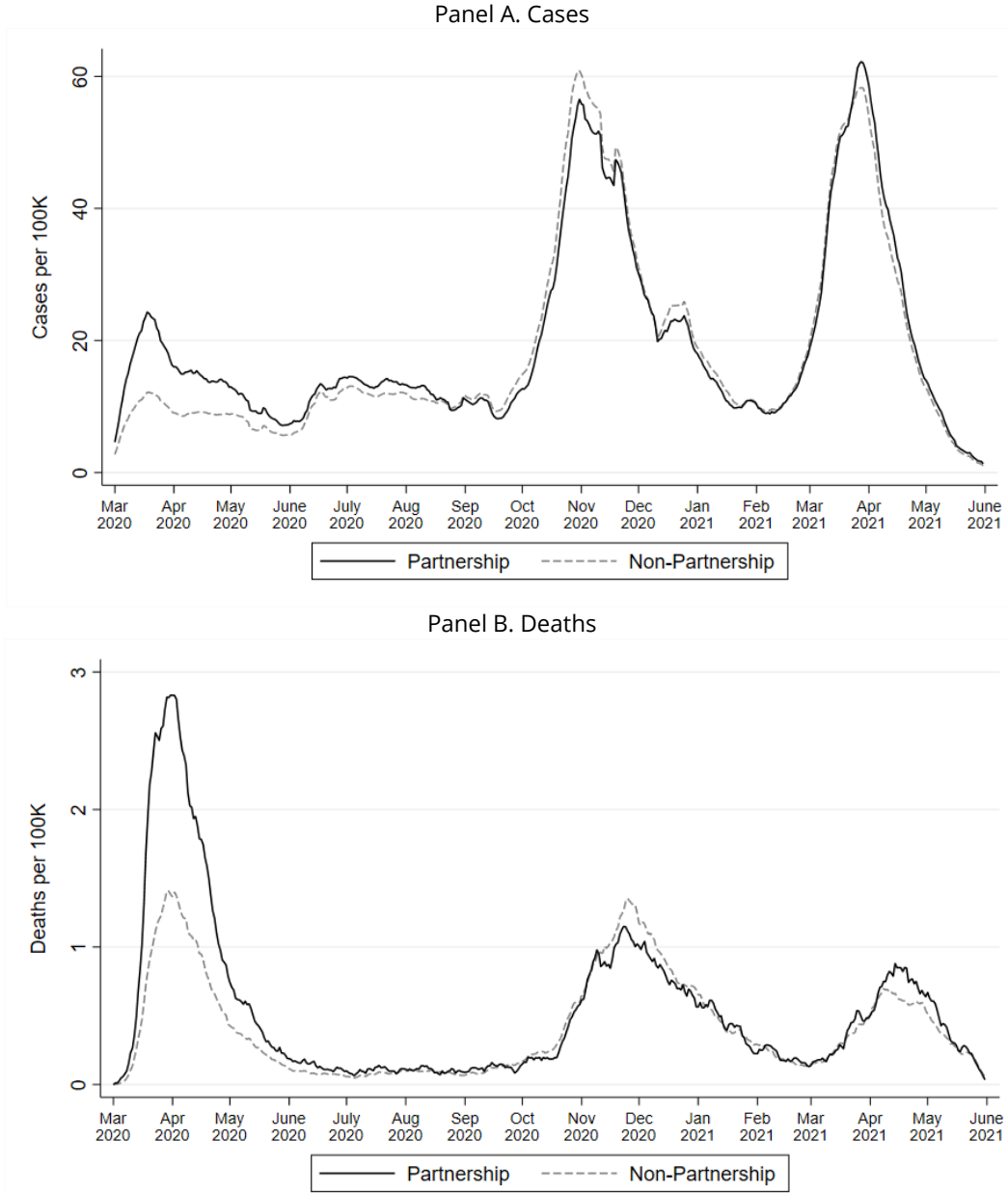
- Strunk, K. O., Harbatkin, E., Torres, C., McIlwain, A., Cullum, S., & Griskell, C. (2021). *Partnership turnaround: Year three report*. Education Policy Innovation Collaborative. <https://epicedpolicy.org/partnership-turnaround-year-three-report/>
- Strunk, K. O., Marsh, J. A., Hashim, A. K., Bush-Mecenas, S., & Weinstein, T. (2016). The impact of turnaround reform on student outcomes: Evidence and insights from the Los Angeles Unified School District. *Education Finance and Policy, 11*(3), 251–282. https://doi.org/10.1162/EDFP_a_00188
- Thompson, C., Henry, G., & Preston, C. (2016). School Turnaround Through Scaffolded Craftsmanship. *Teachers College Record, 118*(13), 1–26.
- Trujillo, T., & Renee, M. (2012). Democratic School Turnarounds: Pursuing Equity and Learning from Evidence. In *National Education Policy Center*. National Education Policy Center. <https://eric.ed.gov/?id=ED536004>
- Trust, T., & Whalen, J. (2020). Should Teachers be Trained in Emergency Remote Teaching? Lessons Learned from the COVID-19 Pandemic. *Journal of Technology and Teacher Education, 28*(2), 189–199.
- US Census Bureau. (2021, August 11). Economic Hardship Declined in Households With Children as Child Tax Credit Payments Arrived. *Census.Gov*. <https://www.census.gov/library/stories/2021/08/economic-hardship-declined-in-households-with-children-as-child-tax-credit-payments-arrived.html>
- VanLone, J., Pansé-Barone, C., & Long, K. (2022). Teacher preparation and the COVID-19 disruption: Understanding the impact and implications for novice teachers. *International Journal of Educational Research Open, 3*, 100120. <https://doi.org/10.1016/j.ijedro.2021.100120>
- Verlenden, J. V., Pampati, S., Rasberry, C. N., Liddon, N., Hertz, M., Kilmer, G., Viox, M. H., Lee, S., Cramer, N. K., Barrios, L. C., & Ethier, K. A. (2021). Association of Children’s Mode of School Instruction with Child and Parent Experiences and Well-Being During the COVID-19 Pandemic—COVID Experiences Survey, United States, October 8–November 13, 2020. *Morbidity and Mortality Weekly Report, 70*(11). <https://www.cdc.gov/mmwr/volumes/70/wr/pdfs/mm7011a1-H.pdf>
- Wadhwa, R. K., Wadhwa, P., Gaba, P., Figueroa, J. F., Joynt Maddox, K. E., Yeh, R. W., & Shen, C. (2020). Variation in COVID-19 hospitalizations and deaths across New York City boroughs. *JAMA Network Open, 3*(21), 2192–2195. <https://doi.org/10.1001/jama.2020.7197>
- Weddle, H., Hashim, A. K., & Irondi, O. (2022). *District and School Leaders’ Perspectives on Leading and Learning During the COVID-19 Pandemic*.

<https://epicedpolicy.org/district-leaders-perspectives-on-the-covid19-pandemic/>

- Wei, R. C., Darling-Hammond, L., Andree, A., Richardson, N., & Orphanos, S. (2009). *Professional learning in the learning profession: A status report on teacher development in the u.s. And abroad. Technical report* (No. ED536383). ERIC. <https://eric.ed.gov/?id=ED536383>
- Zamarro, G., Camp, A., Fuchsman, D., & McGee, J. (2021, September 16). Pandemic prompts more teachers to consider early retirement or new career. *The Conversation*. <http://theconversation.com/pandemic-prompts-more-teachers-to-consider-early-retirement-or-new-career-166871>
- Zamarro, G., & Prados, M. J. (2021). Gender differences in couples' division of childcare, work and mental health during COVID-19. *Review of Economics of the Household*, 19(1), 11–40. <https://doi.org/10.1007/s11150-020-09534-7>
- Zimmer, R., Henry, G. T., & Kho, A. (2017). The effects of school turnaround in Tennessee's achievement school district and innovation zones. *Educational Evaluation and Policy Analysis*, 39(4), 670–696. <https://doi.org/10.3102/0162373717705729>
- Zippel, C. (2021, August 30). After Child Tax Credit Payments Begin, Many More Families Have Enough to Eat. *Center on Budget and Policy Priorities*. <https://www.cbpp.org/blog/after-child-tax-credit-payments-begin-many-more-families-have-enough-to-eat>

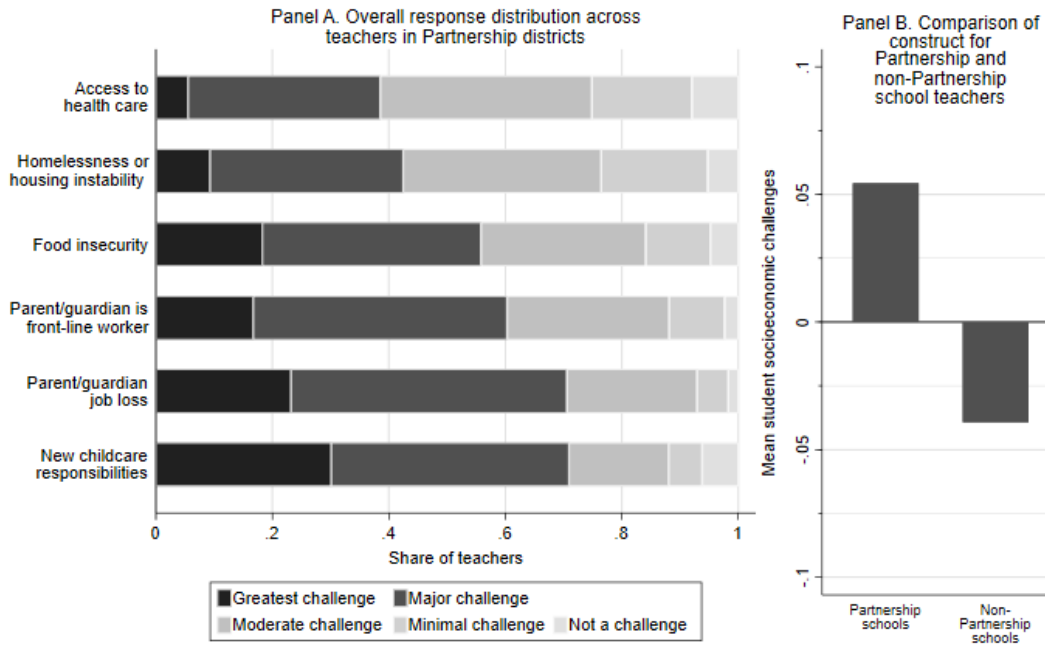
FIGURES

Figure 1. Case, death, and positivity rates over time by Partnership status



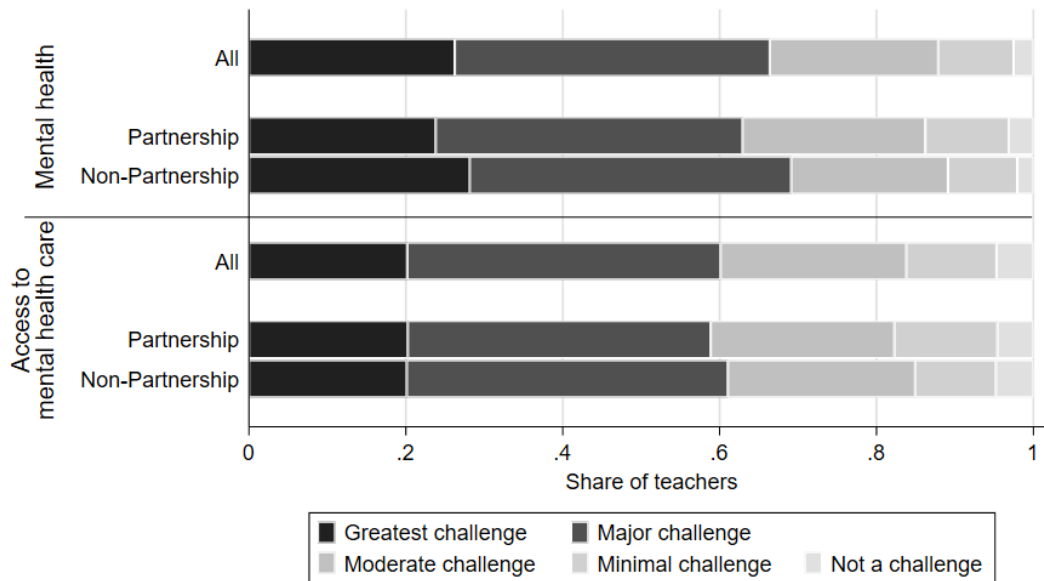
Note: Data from the Michigan Department of Health and Human Services, downloaded June 15, 2021. Seven-day rolling averages of county cases per 100,000 population and deaths per 100,000 population applied to school districts, weighted by student enrollment, from March 15, 2020 through June 14, 2021.

Figure 2. Teacher perceptions of selected items as a challenge for their students



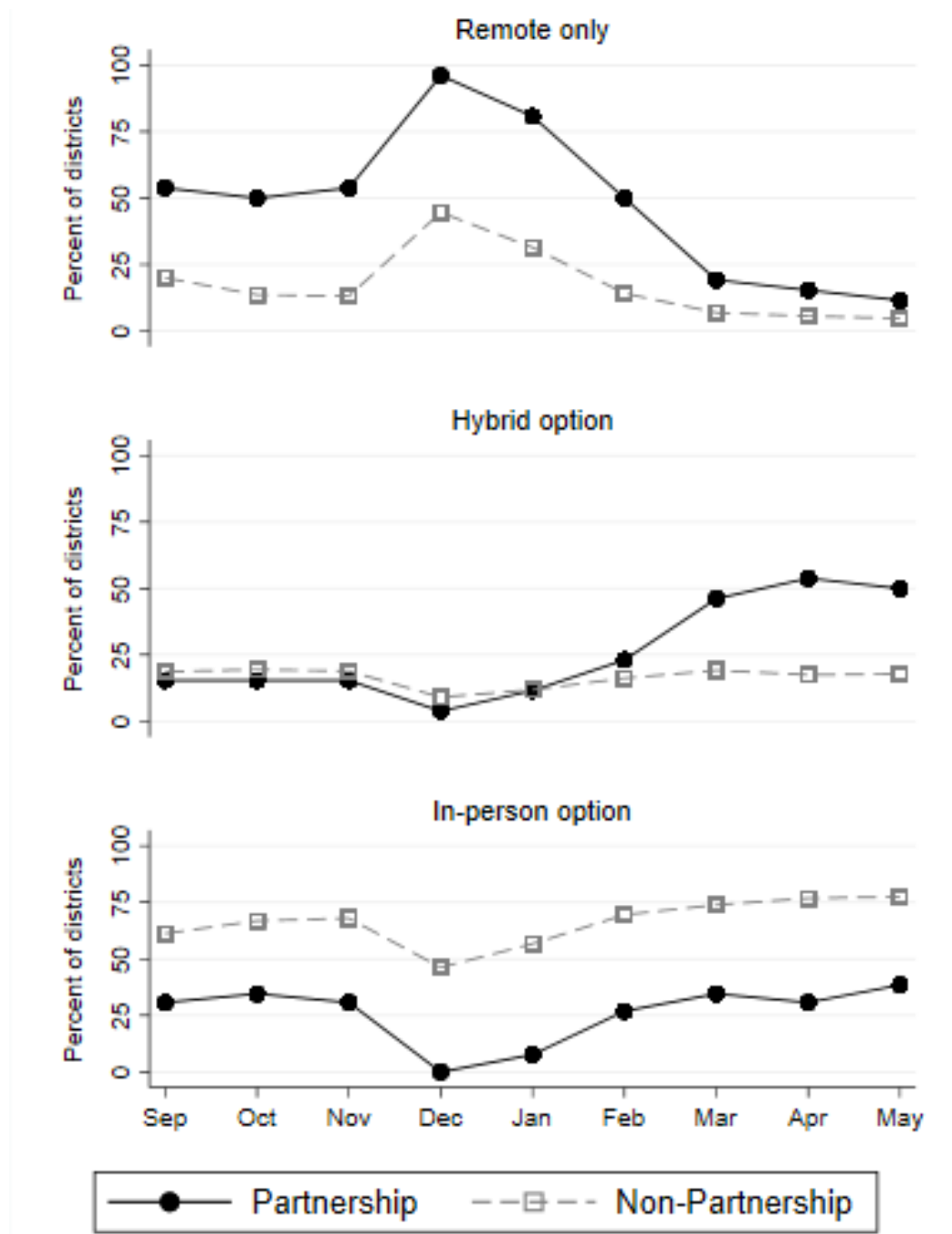
Note: Sample includes teachers in Partnership districts only. Teachers were asked, “To what extent have each of the following been a challenge for your students this school year?” Response options were “not a challenge,” “a minimal challenge,” “a moderate challenge,” “a major challenge,” and “the greatest challenge.” Bars provide weighted share of teacher respondents selecting each option across Partnership districts (Partnership and non-Partnership schools). Panel A provides the weighted frequency distributions for each item across all teachers in Partnership districts. Panel B provides the weighted means for Partnership and non-Partnership school teachers within Partnership districts on the factor construct containing each of the items in Panel A. The difference is 0.09 standard deviations ($p=0.132$). Data collected in February-March 2021.

Figure 3. Teacher perceptions of student mental health challenges within Partnership districts and by Partnership school status within Partnership districts



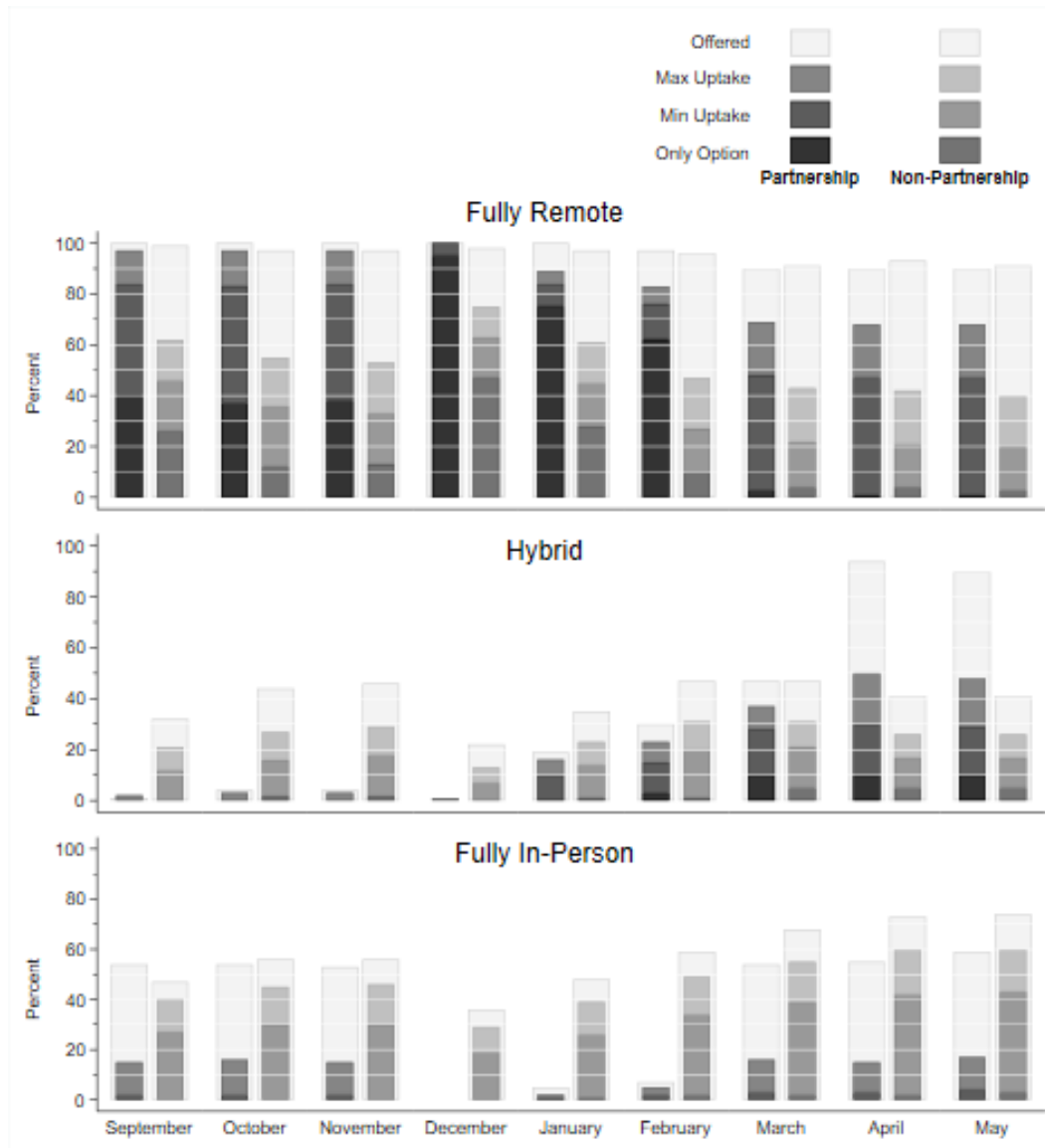
Note: Sample includes teachers in Partnership districts only. Teachers were asked, “To what extent have each of the following been a challenge for your students this school year?” Response options were “not a challenge,” “a minimal challenge,” “a moderate challenge,” “a major challenge,” and “the greatest challenge.” Bars provide weighted share of teacher respondents selecting each option. “All” bars represent all teachers in Partnership districts (both Partnership and non-Partnership schools), “Partnership” bars represent just Partnership school teachers, and “Non-Partnership” bars represent non-Partnership schools teachers in Partnership districts. The difference in distributions of Partnership and non-Partnership schools in Partnership districts based on a design-based F-test is not statistically significant at conventional levels ($p=0.051$ for mental health and $p=0.540$ for access to mental health care). Data collected in February-March 2021.

Figure 4. District modality plans by month and Partnership status



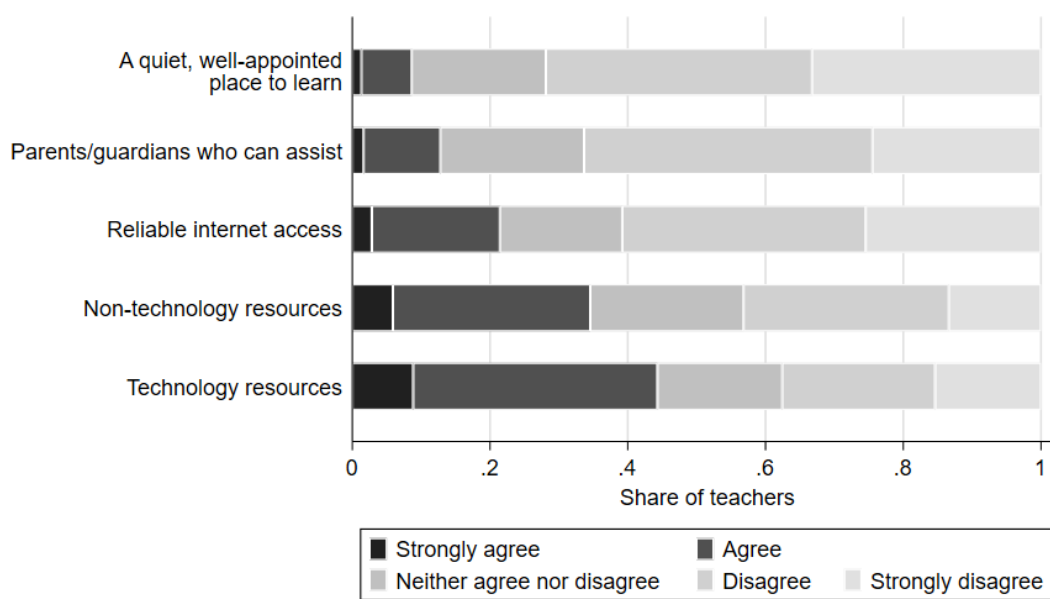
Note: Sample is all districts with ECOL plans in Michigan. Because plans were submitted at the district level, Partnership represents Partnership districts and non-Partnership represents non-Partnership districts. Marker heights represent the share of districts that reported plans to operate in a given modality in a given month. Fully in-person option means districts have an option for students to attend in-person for all days. Hybrid classifies districts without a fully in-person option that have any students attending a hybrid model. Fully remote identifies districts in which all students attend remotely. Figures exclude virtual districts that were remote prior to the pandemic.

Figure 5. Estimated take-up of instructional modality by month and Partnership district status



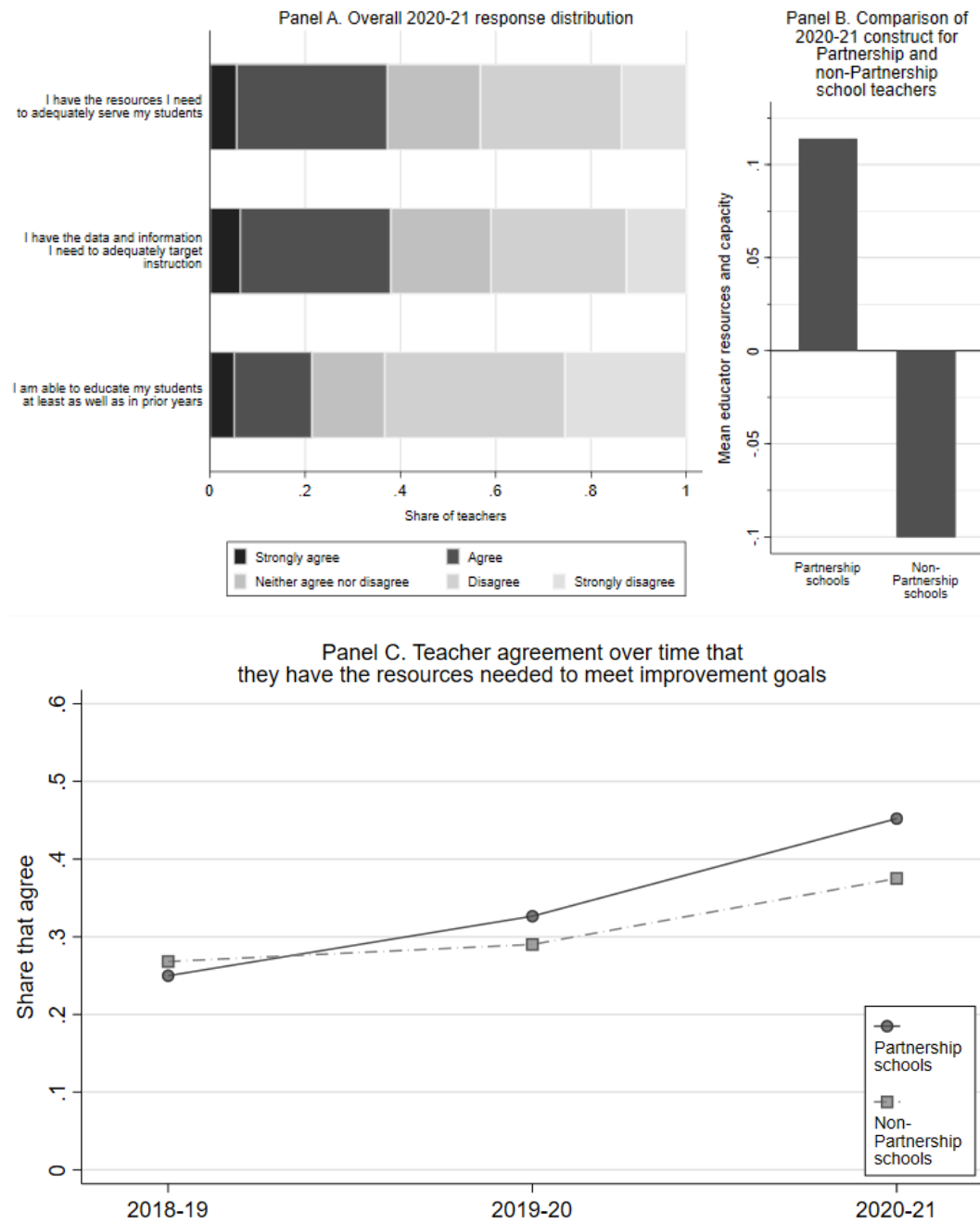
Note: Sample is all districts with ECOL plans in Michigan. Because plans were submitted at the district level, Partnership represents Partnership districts and non-Partnership represents non-Partnership districts. Lightly shaded outer bar denotes the percent of students offered each modality. Darker shaded ranges denote the estimated percent of students who received instruction in each modality in Partnership and non-Partnership districts, respectively, with the darkest colors within each bar indicating that the modality is the only option, next darkest denoting the estimated minimum share of students in that modality, and the lightest denoting the estimated maximum share of students in that modality.

Figure 6. Teacher perceptions of student at-home resources and learning supports



Note: Sample includes teachers in Partnership districts only. Teachers were asked, "To what extent do you agree with each of the following statements?" where the full statements indicate that they believe their students have the listed resource (e.g., "My students have a quiet, well-appointed place to learn," "My students have parents or guardians who can assist with classroom, assignment, and comprehension as needed."). Response options were "strongly agree," "agree," "neither agree nor disagree," "disagree," and "strongly disagree." Bars provide weighted share of teacher respondents selecting each option across Partnership districts (including both Partnership and non-Partnership schools). There are no significant or substantive item-level differences between teachers in Partnership and non-Partnership schools in Partnership districts or on a construct drawing on these items representing student at-home learning resources. Data collected in February-March 2021.

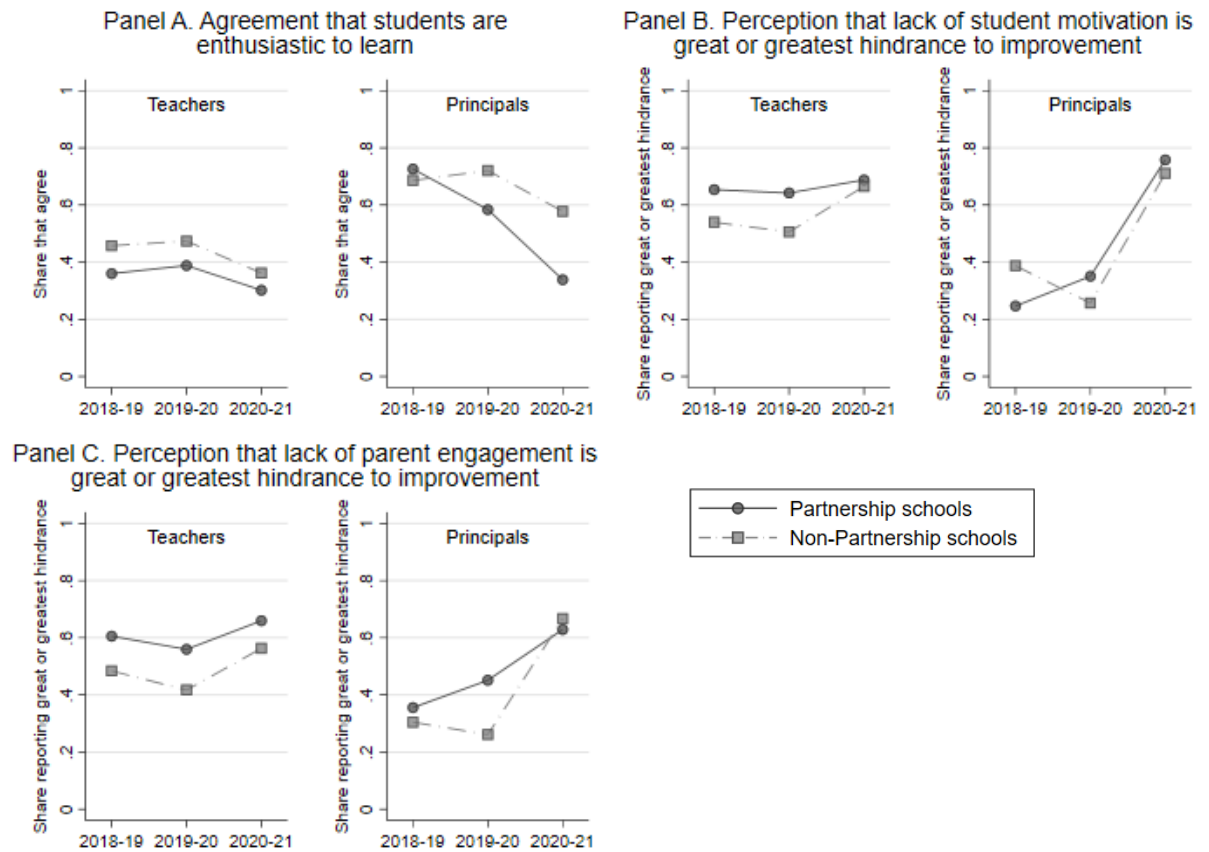
Figure 7. Teacher reports of resources and capacity to educate students



Note: Sample includes teachers in Partnership districts only. For Panels A and B, teachers were asked, “To what extent do you agree with each of the following statements?” where the full statements indicate that they believe they have the listed resource or capacity (e.g., “I have the data and information I need to adequately target instruction to students,” “I have the resources I need to adequately serve my students,” “I am able to educate my students at least as well as in prior years.”) Response options were “strongly agree,” “agree,” “neither agree nor disagree,” “disagree,” and “strongly disagree.” Bars provide weighted share of teacher respondents selecting each option across Partnership districts (Partnership and non-Partnership schools). Panel A provides the weighted

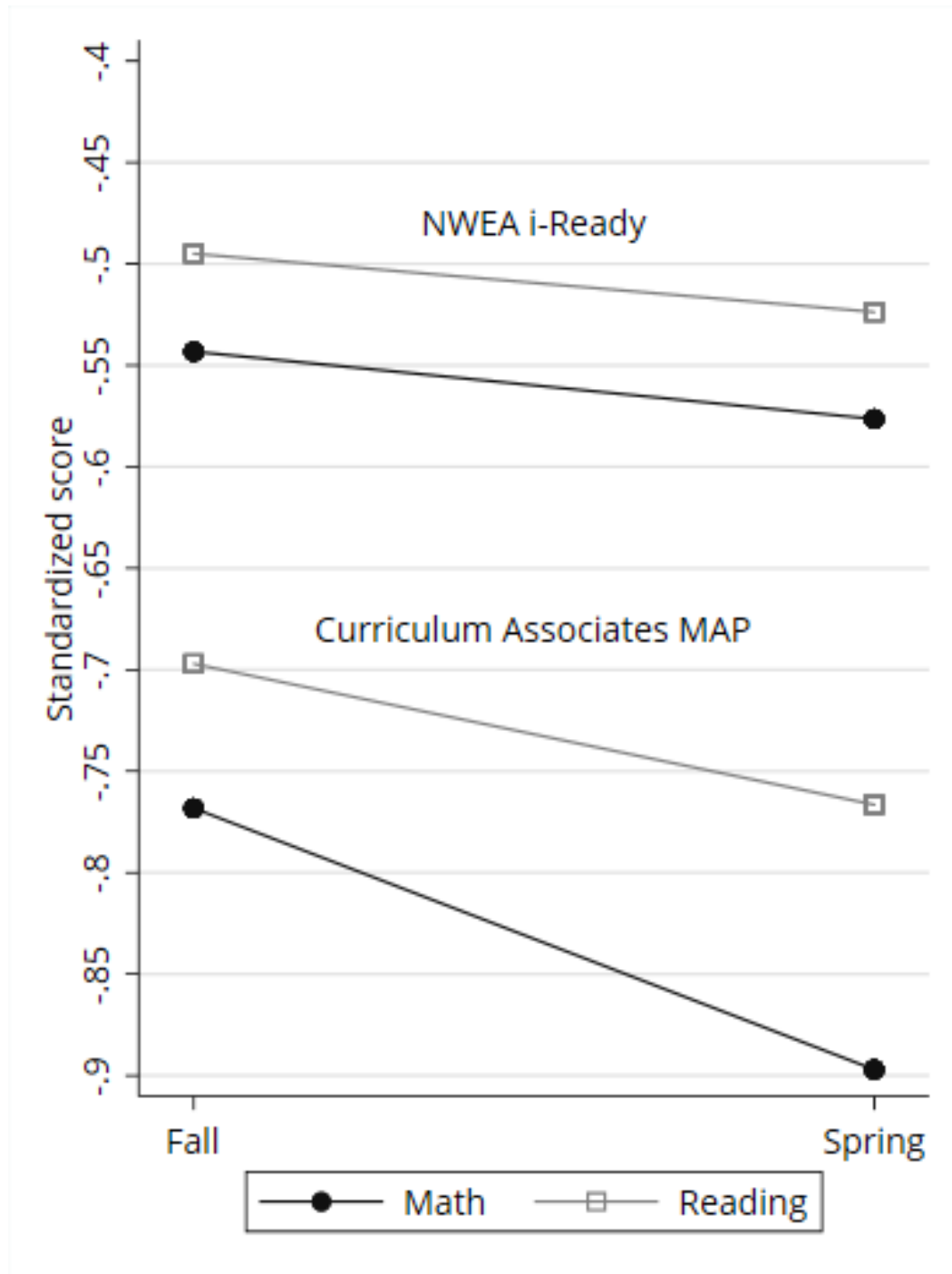
frequency distributions for each item. Panel B provides the weighted means for Partnership and non-Partnership school teachers within Partnership districts on the factor construct containing each of the items in Panel A. The difference is 0.21 standard deviations ($p < 0.001$). For Panel C, teachers were asked, "Please indicate the extent to which you agree or disagree with the following statement about your organization's improvement goals." Marker heights provide the weighted share of teachers in each year that responded with agree or strongly agree on the five-point Likert scale. 2018-19 and 2019-20 data collected in November-December (pre-COVID); 2020-21 data collected in February-March (during COVID).

Figure 8. Educator perceptions of student enthusiasm and parent engagement over time



Note: Sample includes teachers and principals in Partnership districts only. Data for Panel A come from a question in which educators were asked to indicate the extent to which they agreed with the statement, "Students are enthusiastic and excited to learn." Response options were "strongly agree," "agree," "neither agree nor disagree," "disagree," and "strongly disagree." Marker heights reflect the share of educators selecting "agree" or "strongly agree" in each year of the survey. Data for Panels B and C come from a question in which educators were asked to indicate the extent to which lack of student motivation was a hindrance to achieving improvement goals. Response options were "not a hindrance," "a slight hindrance," "a moderate hindrance," "a great hindrance," or "the greatest hindrance." Marker heights reflect the share of educators selecting "a great hindrance" or "the greatest hindrance" in each year of the survey. 2018-19 and 2019-20 data collected in November-December (pre-COVID); 2020-21 data collected in February-March (during COVID).

Figure 9. Partnership district standardized benchmark scores, 2020-21



Note: Means of district-by-grade-by-subject means. Scale scores are standardized based on full state; graphic presents values of these standardized means for Partnership districts only. Marker heights denote district mean of standardized score for 19 Partnership districts that used NWEA's i-Ready and four Partnership districts that used Curriculum Associates' MAP assessment. District-by-grade-by-subject mean scale scores converted to standard deviation units using student-level means and standard deviations within grade, subject, assessment (i.e., MAP or i-Ready), and timepoint.

TABLES

Table 1. Student population characteristics by Partnership status

Panel A. Community characteristics

	Partnership	Non-Partnership
<u><i>Race and ethnicity</i></u>		
Black	29.40 (12.89)	13.04 (12.30)
White	62.54 (12.55)	79.31 (13.46)
American Indian or Alaska Native	0.36 (0.12)	0.52 (1.08)
Asian	3.01 (1.20)	3.05 (2.49)
Native Hawaiian or Pacific Islander	0.03 (0.01)	0.03 (0.02)
Other race	1.86 (0.76)	1.20 (1.00)
Two or more races	2.80 (0.61)	2.86 (0.96)
Hispanic or Latino/a/x	6.42 (1.89)	5.02 (2.49)
<u><i>Poverty</i></u>		
Individual poverty rate	20.03 (4.64)	14.68 (5.14)
Family poverty rate	15.06 (4.08)	10.25 (4.19)
Under 18 poverty rate	29.43 (7.84)	20.19 (8.47)
<u><i>Federal assistance</i></u>		
Household SNAP recipients	9.54 (2.46)	6.30 (2.75)
Households with children SNAP recipients	31.44 (8.40)	21.58 (9.09)
Observations (county)	11	72

Panel B. School and district characteristics

	Partnership schools	Non- Partnership schools in Partnership districts	Non- Partnership schools	Partnership districts	Non- Partnership districts
Economically disadvantaged	91.2 (4.9)	89.4 (7.0)	59.2 (24.8)	90.5 (5.9)	58.5 (24.6)
English learner	3.9 (9.1)	10.5 (17.2)	6.2 (12.6)	6.6 (13.3)	6.1 (12.5)
Black	85.0 (21.3)	65.3 (27.9)	16.7 (26.4)	77.1 (26.0)	15.6 (25.4)
Latino/a/x or Hispanic	5.8 (12.8)	14.0 (19.5)	8.1 (11.5)	9.1 (16.3)	8.0 (11.3)
Other nonwhite	2.8 (4.0)	6.8 (6.3)	8.2 (8.9)	4.4 (5.4)	8.2 (8.9)
White	6.4 (12.0)	13.9 (15.3)	67.0 (29.0)	9.4 (13.9)	68.1 (28.2)
Special education	17.5 (6.5)	17.5 (7.2)	18.6 (20.4)	17.5 (6.8)	18.6 (20.6)
Observations	100	68	3351	168	3283

Note: Partnership schools and districts defined as those that remained in the Partnership Model in the 2019-20 school year. Panel A uses county-level data from U.S. Census Bureau American Community Survey five-year estimates, 2013–2018, applied to districts and weighted by district size. The ACS asks about ethnicity separately from race; categories within the race and ethnicity panel therefore do not sum to 100. Panel B uses statewide administrative education data from 2019-20 collapsed to the school level.

Table 2. Cumulative case and death rates per 100,000 residents by Partnership status

Panel A. MDDHS data by **Partnership district status**

	Partnership <i>districts</i>	Non-Partnership <i>districts</i>
Cumulative cases per 100K	9,049.3	8,629.6
Cumulative deaths per 100K	244.3	190.7
Deaths per confirmed cases	2.7%	2.2%

Panel B. Teacher perception data (surveys) by **Partnership school status within Partnership districts**

	Partnership <i>schools</i>	Non-Partnership <i>schools</i>
Students with immediate family members with COVID-19	25–41%	21–38%
Students with other family members with COVID-19	31–48%	27–45%

NOTE: Panel A provides county-level case and death rates from Michigan Department of Health and Human Services per 100,000 applied to districts and weighted by district size. Totals as of June 14, 2021. Panel B provides teacher perception data from teacher survey, which was administered in Partnership districts only. The Non-Partnership schools column therefore includes only teachers in non-Partnership schools in Partnership districts. The difference in distributions of Partnership and non-Partnership schools based on a design-based F-test is statistically significant ($p=0.036$ for immediate family and $p=0.025$ for other family).

SUPPLEMENTAL TABLES

Table A-1. Survey response rates by year

	Teachers	Principals
Wave 1 (2018-19)	38.3% (2,718)	28.6% (81)
Wave 2 (2019-20)	49.2% (3,224)	37.8% (88)
Wave 3 (2020-21)	38.5% (2,342)	46.6% (116)

NOTE: Percentages are response rates as a share of total eligible teachers and principals, respectively, to whom the survey was administered in each wave. Figures in parentheses are total respondents. These numbers exclude individuals who responded that they were not eligible (i.e., not classroom teachers or principals) or who opted out. Total respondents include partial responses, which are those that answered at least one question beyond the introductory feeder questions.

Table A-2. Survey Respondent Balance, 2020-21, standardized

Panel A. Teachers

	Respondents	Non-respondents	Diff	SE	t-stat	p-value (diff)
Black	-0.112	0.062	-0.174	0.026	-6.636	0.000
Hispanic	0.006	-0.017	0.024	0.026	0.916	0.360
White	0.099	-0.051	0.150	0.026	5.720	0.000
Other nonwhite	0.027	-0.009	0.036	0.027	1.353	0.176
Race unknown	-0.014	0.001	-0.014	0.026	-0.552	0.581
Female	0.077	-0.029	0.107	0.026	4.076	0.000
Elementary certified	-0.020	0.032	-0.052	0.026	-1.978	0.048
Secondary certified	0.046	-0.031	0.077	0.026	2.932	0.003
New to teaching or district	0.072	-0.023	0.095	0.027	3.571	0.000
Observations	6,081					

Panel B. Principals

	Respondents	Non-respondents	Diff	SE	t-stat	p-value (diff)
Black	0.383	0.453	-0.069	0.130	-0.534	0.594
Hispanic	0.034	0.232	-0.198	0.169	-1.173	0.242
White	-0.361	-0.486	0.125	0.121	1.037	0.301
Other nonwhite	-0.061	-0.039	-0.022	0.111	-0.200	0.842
Race unknown	0.001	-0.093	0.094	0.088	1.071	0.285
Female	-0.384	-0.347	-0.037	0.148	-0.247	0.805
Elementary certified	-0.181	-0.240	0.059	0.128	0.464	0.643
Secondary certified	0.027	-0.018	0.046	0.128	0.358	0.721
Observations	249					

Table A-3. Factor loadings

Panel A. Socioeconomic challenges		
	Loadings	ψ (uniqueness)
Challenges: Access to healthcare	0.747	0.442
Challenges: Food insecurity	0.778	0.394
Challenges: Homelessness or housing instability	0.796	0.366
Challenges: Parent/guardian job loss, unemployment, lost wages, furlough	0.785	0.384
Challenges: Parent/guardians have jobs as a front-line worker	0.682	0.535
Challenges: new childcare responsibilities	0.665	0.558
<i>N</i>	1,089	
α	0.828	
Panel B. Student at-home resources and supports		
	Loadings	ψ (uniqueness)
Students have reliable internet access	0.750	0.437
Students have other tech resources they need to learn	0.655	0.571
Students have other non-tech resources they need to learn	0.703	0.506
Students have parents/guardians who can assist as needed	0.752	0.434
Students have a place to learn	0.780	0.392
<i>N</i>	2,172	
α	0.773	
Panel C. Educator resources and capacity		
	Loadings	ψ (uniqueness)
Able to educate students at least as well as prior years	0.786	0.383
Have data and information to target instruction	0.844	0.287
Have resources to adequately serve students	0.784	0.386
<i>N</i>	2,180	
α	0.727	

NOTE: Factor loadings from factor analysis using principal components factors. Ns vary because of item nonresponse.

Table A-4. OLS regression results, teacher agreement that they have resources to meet goals

	(1)	(2)
2019-20	0.044 (0.026)	-0.004 (0.035)
2020-21	0.291*** (0.029)	0.195*** (0.039)
Partnership school (2018-19)		-0.045 (0.043)
Partnership school x 2019-20		0.118* (0.054)
Partnership school x 2020-21		0.212*** (0.059)
Constant	2.819*** (0.021)	2.837*** (0.028)
Observations	7424	7424

*Teachers were asked about the extent to which they agree that they have the resources needed to meet improvement goals. Results from regression of response to that question (five-point Likert scale where 5 is strongly agree, 4 agree, 3 neither agree nor disagree, 2 disagree, and 1 strongly disagree) on year indicators (Column 1) and year indicators interacted with Partnership school indicator (Column 2). Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$*