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SEPTEMBER 2021

Partnership Turnaround: Year Three Report

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Partnership Turnaround: Year Three Report

SEPTEMBER 2021

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Year Three Report**

EXECUTIVE SUMMARY

Year Three Report:
Executive Summary

Overview

This interim report is part of a multi-year evaluation of the implementation and efficacy of Michigan's Partnership Model of school and district turnaround. The Partnership Model aims to build district capacity to improve outcomes in the lowest performing schools and districts by fostering a coalition of partners from the Michigan Department of Education (MDE), Intermediate School Districts (ISDs), and local communities. Partnership districts and charter organizations crafted three-year Partnership Agreements that highlighted districts' specific needs, established strategies to address those needs, and detailed measurable achievement and process goals. If these goals were not met by the end of the three-year period, schools would be subject to high-stakes accountability consequences, including the potential for reconstitution or closure. The state also allocated $6 to $7 million in each year of the reform to date in the form of 21h grants to support districts' efforts to meet their goals.

This is the third annual report that will be released as part of our evaluation of the Partnership Model. These reports are different and separate from the Review of Goal Attainment (RGA) process the Office of Partnership Districts (OPD) conducts with Partnership districts. The Education Policy Innovation Collaborative (EPIC) is the strategic research partner to MDE, and although MDE requested the analysis documented here, our evaluation and its results are independent of MDE and the conclusions and recommendations are EPIC's own.

The purpose of this report is to provide an updated overview of Partnership Model implementation and outcomes in Partnership schools and districts across the state. Given that this report covers both the 2019-20 and 2020-21 school years, it documents how the COVID-19 pandemic has affected Partnership schools and districts as they work to support students and families during this unprecedented time. To describe implementation, outcomes, and the effects of COVID-19 on Partnership schools and districts, we use an event study design that leverages longitudinal data on students and educators throughout the state, combined with analysis of data from Partnership teacher and principal surveys, interviews with Partnership leaders, district instructional modality data, and county-level data on COVID-19 transmission and deaths. This multi-method approach allowed us to answer questions not only about the effect of the reform, but also how the model was implemented, how educators perceived implementation, and how and why implementation varied depending on different contexts.

MAIN FINDINGS

Pre-Pandemic Student Achievement Gains Were Strongest Among the Lowest Achieving Students

The Year Two Report showed that students in Partnership schools were making improvements prior to the pandemic—especially in Cohort 1. We find this year that (1) the gains in Cohort 1 were largely concentrated among the students who were lowest achieving before the start of the intervention, and (2) while the average Cohort 2 effects were more muted, the lowest achieving Cohort 2 students made significant gains. These estimates are shown in Figure 1.

FIGURE 1. ELA Event Study Estimates for Lower and Higher Achieving Students
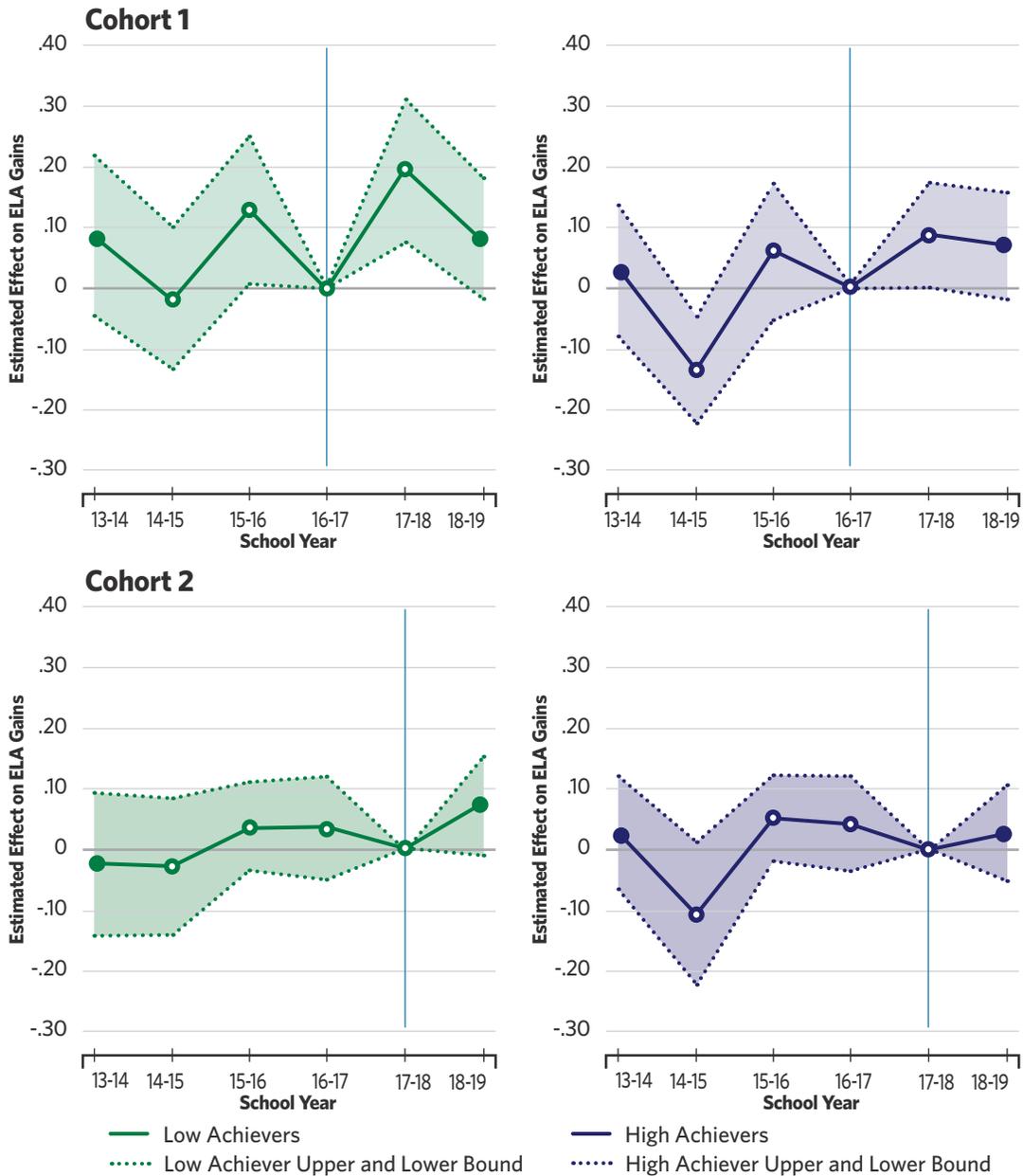
Note: Markers represent coefficient estimates on interaction between Partnership and year indicators in event study models, with the identification year (2016-17 for Cohort 1) as the omitted reference year. Shaded regions represent 95% confidence intervals.

The COVID-19 Pandemic Struck Partnership Communities Especially Hard, Undermining Opportunities to Learn in Partnership Schools and Districts

Educators and students in Partnership districts grappled with extraordinary challenges related to the COVID-19 pandemic. The virus struck Partnership communities heavily at the outset of the pandemic and Partnership communities experienced more community spread and higher death rates throughout the 2019-20 and 2020-21 school years, as shown in Figure 2.

FIGURE 2. Average Cumulative Cases and Deaths by Partnership District Status

Cases

District Mean Cumulative Cases per 100K

Total — 9,089 (Partnership): 7,634 (As of June 30, 2021), 1,455 (As of June 30, 2020)

Total — 8,657 (Non-Partnership): 7,751 (As of June 30, 2021), 906 (As of June 30, 2020)

Deaths

District Mean Cumulative Deaths per 100K

Total — 247 (Partnership): 138 (As of June 30, 2021), 109 (As of June 30, 2020)

Total — 193 (Non-Partnership): 137 (As of June 30, 2021), 56 (As of June 30, 2020)

Legend: As of June 30, 2020 / As of June 30, 2021

Note: Figures provide mean cumulative community case (top panel) and death (bottom panel) totals in Partnership and non-Partnership districts, respectively, experienced. County totals applied to districts where counties are located and summed up to June 30, 2020 (green bars) and then June 30, 2021 (blue bars). Bar heights represent means of those cumulative totals weighted by district enrollment. The first bar of the top panel can therefore be interpreted as: On average, students in Partnership districts lived in communities that experienced 1,455 confirmed cases per 100,000

residents from the beginning of the pandemic through June 30, 2020, and another 7,634 confirmed cases per 100,000 between July 1, 2020 and June 30, 2021, for a total of 9,089 total confirmed cases per 100,000 by June 30, 2021.

Even as districts throughout the state returned to in-person learning in spring 2021, Partnership districts—whose communities were battling high rates of COVID-19—offered remote-only instruction for most of the 2020-21 school year. Learning from home was especially challenging for students in Partnership districts; Partnership district teachers reported that they believed their students grappled with out-of-school challenges related to access to health care and housing, economic instability, food insecurity, and illness, as well as in-school challenges related to resource and capacity constraints. As Figure 2 shows, as the 2020-21 school year came to a close, few educators believed that their students were on track with academic content standards. These findings lay bare the reality that the pandemic's effects will reverberate into future school years as educators and students renew their efforts to accelerate learning.

FIGURE 3. Educators' Estimated Share of Students Who Began on Track and Will End Proficient on Content Standards

Note: Principals and elementary teachers were asked about each subject area; secondary teachers were asked about the subject area of their primary teaching assignment. Bar heights represent the percent of educators who agreed or strongly agreed that their students began on track with content standards in each subject and would end the school year proficient in content standards for each subject. Responses are pooled across principals and elementary and secondary teachers.

Progress Toward Improving On-Time Graduation Rates in Partnership High Schools Stalled During the Pandemic

On-time high school graduation rates, which were ticking up in the first two years of Partnership implementation for Cohort 1 schools, dropped back down in 2019-20 as educators and students in Cohort 1 schools grappled with exceptional challenges related to the pandemic. Cohort 2 graduation rates also remained similar to pre-intervention levels.

In Low-Performing Schools in Michigan, Students Moved to New Schools and Districts at Lower Rates Than Previous Years but Left Public Schooling at Higher Rates

Across Partnership and a group of similarly low-performing comparison schools, the probability of student transfers out of their schools and districts decreased in 2019-20. However, the probability of students leaving Michigan public schools entirely increased. Cohort 1 students in particular were approximately 2 percentage points more likely to leave Michigan education in 2019-20 than in previous years and also more likely to leave than students in low-performing comparison schools.

Kindergarten Enrollment Declined Sharply in Partnership Schools in 2020-21

Kindergarten enrollment in 2020-21 plummeted by 38% and 27% in Cohort 1 and 2 Partnership schools, respectively—substantially steeper drops than the rest of the state. While Partnership district leaders felt financially shielded from enrollment declines by state and federal policies and resources intended to buffer districts from pandemic-related enrollment and revenue shocks, the future of these funding maintenance strategies is unknown.

Student Absenteeism Was Pervasive in Partnership Districts as Educators Grappled with Educating and Supporting Students Who Did Not Attend

Challenges related to student absenteeism that surfaced in prior reports became even more salient during the pandemic as Partnership districts—and especially Partnership schools—shifted to remote instruction. While we do not have reliable administrative data on absenteeism during the pandemic, educators in Partnership schools reported that up to about half of their students were absent each day when they responded to the Partnership survey in February and early March of 2021. In turn, teachers felt that attendance challenges affected their ability to educate students, likely impeding student learning during the pandemic.

Partnership Schools and Districts Continued to Monitor Goals Even As Partnership Evolved from a Sanctions-Based Accountability Policy to a Supportive Capacity-Building Intervention

By summer of 2021, OPD leaned in further to Partnership as a supportive rather than punitive intervention, providing Cohort 1 districts with the option to remain in Partnership for an additional year or to exit. Districts elected to remain in Partnership to continue receiving Partnership supports and 21h funds. These decisions on the part of the state and districts further cemented Partnership as an intervention focused more on supports than sanctions, reflecting school turnaround policy across the country. Although district and charter leaders perceived Partnership as a supportive rather than punitive intervention, schools and districts continued to monitor progress toward goals even during the pandemic.

While Elements of School Climate and Culture Improved in Partnership Schools, Perceptions of Student Motivation and Parent Engagement Decreased During the Pandemic

School climate and culture appeared to improve somewhat in Partnership schools (in Cohort 1 in particular) in the 2020-21 school year, with teachers and principals reporting that teachers have high expectations for and a strong rapport with students, and that they and their colleagues share beliefs about the school's mission. On the other hand, educators across Partnership districts perceived that students were less enthusiastic to learn than in prior years and a large majority of principals and teachers perceived that low student motivation and a lack of parental engagement were great hindrances to school improvement. Student motivation and parent engagement may have been a particular challenge in 2020-21 due to the largely virtual format of schooling as well as the disproportionate effect of the pandemic on Partnership communities.

The Share of Partnership School Teachers Leaving Their Schools and Districts Declined in 2020-21, but More Teachers Left the Profession Entirely

Partnership teachers continued to leave their schools and districts at higher rates than other teachers throughout the state, though Cohort 2 showed signs of progress toward increasing teacher retention in school. Partnership teachers were more likely to exit the profession entirely in 2019-20 than in prior years—especially in Cohort 1. Exits from the profession were concentrated among less experienced and Black teachers.

Survey data show that the share of teachers in Partnership districts intending to stay in their current role increased in the 2020-21 school year, and that this increase was even steeper in Partnership schools in partiular. Teachers cited factors such as school leadership and culture and climate as their top reasons for wanting to stay. These responses highlight that teachers in Partnership schools and districts value malleable aspects of the workplace that leaders can prioritize in school improvement efforts.

School Leadership Continued to be a Bright Spot in Partnership Districts and Partnership Schools in Particular

Teachers largely reported that their principals were effective school leaders. Reports of principal effectiveness increased over the three study years and were higher in Partnership schools than in non-Partnership schools in Partnership districts. Of particular importance in 2020-21, teachers on average said they felt supported by their school and district administrations during the pandemic. Finally, the vast majority of principals in Partnership districts reported plans to stay in their current positions into the 2021-22 school year, suggesting that teachers' positive experiences with school leadership may sustain into future years.

POLICY IMPLICATIONS

State and Local Policymakers Will Need to Focus on Accelerating Learning in the 2021-22 School Year and Beyond

While educators and students made extraordinary efforts to teach and learn during the pandemic, they contended with immense challenges both inside and outside of the classroom. Students in Partnership schools and districts are likely to enter the 2021-22 school year substantially behind academically, and there will need to be additional efforts to accelerate learning and to meet students where they are to help them succeed. MDE has already begun to make resources available to educators to support accelerated learning efforts.

Students in Partnership Districts Will Need Supports Beyond Academics

While academic growth is a core focus of the Partnership Model, our findings suggest that students in Partnership districts will need robust socioemotional and resource supports. Districts could invest pandemic relief funds in high quality professional development to help educators to implement trauma-informed practices and infuse socioemotional learning into their lesson plans and daily routines. As educators and students return to in-person schooling, providing them with the necessary tools to cope with trauma and build resilience will be critical to accelerate learning and close the opportunity gap for students in Partnership schools.

Continued Funding and Support Will Be Critical to Help Partnership Schools and Other Low-Performing Schools and Districts Meet the Academic and Socioemotional Needs of Students

Partnership districts will feel the weight of any enrollment declines and high rates of absenteeism that continue into the 2021-22 school year because they rely heavily on state and federal funding, which is calculated based on student enrollment and penalizes high levels of absenteeism. At the same time, the academic and socioemotional challenges that have been exacerbated for students in Partnership schools and districts during the pandemic will require additional supports and funding to address. A growing literature demonstrates that money and resources are critical for school and district improvement—and these resources will be particularly important in coming years.

There Needs to be Increased Efforts to Recruit and Retain Teachers—and Especially Black Teachers— in Lower Performing Schools and Districts

Across the sample of low-performing schools, teachers—especially novice and Black teachers— were substantially more likely to exit the profession after 2019-20 than in prior years. Although more educators reported plans to stay in their current roles for the 2021-22 school year, it is unclear the extent to which this is a pandemic blip or a true shift in trajectory. Either way, policymakers at both state and local levels will need to continue to focus on educator recruitment and retention efforts, especially into low-performing schools and districts. Given a large evidence base on the benefits of Black teachers for student outcomes, these efforts should focus on recruiting more Black teachers in particular.

**Partnership Turnaround:
Year Three Report**

SECTION ONE:
INTRODUCTION

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Section One:
Introduction

PURPOSE OF THIS REPORT

Michigan began implementing its Partnership Model of school and district turnaround during the 2016-17 school year with the intention of improving operations and outcomes in Michigan's lowest performing schools and in the districts in which those schools reside. In spring 2018, the Education Policy Innovation Collaborative (EPIC) at Michigan State University began a longitudinal evaluation of the implementation and efficacy of Michigan's Partnership Model. This evaluation includes analyses of student academic outcomes, educator outcomes, surveys of teachers and principals in Partnership districts (in both Partnership and non-Partnership schools in those districts), and interviews with Partnership district system leaders.

The purpose of this third annual report is to provide an updated overview of Partnership Model implementation and outcomes in Partnership schools and districts across the state. Given that this report covers both the 2019-20 and 2020-21 school years, it documents how the COVID-19 pandemic has affected Partnership schools and districts as they work to support students and families during this unprecedented time.

MICHIGAN'S PARTNERSHIP MODEL OF SCHOOL AND DISTRICT TURNAROUND

In this section, we briefly review the development of Michigan's Partnership Model of school and district turnaround and its underlying Theory of Change. Interested readers should look to the previous two years' reports for a more thorough description of the Partnership Model and its evolution. We then discuss the characteristics of students enrolled in Partnership schools

and a set of "near-selected" comparison schools—schools that narrowly missed inclusion in the Partnership Model based on the state's strategy for identifying lowest performing schools because they performed just slightly higher than the established cut-offs.[1]

The Partnership Model Theory of Change

The Partnership Model emerged in spring of 2017 under the leadership of then-State Superintendent Brian Whiston. Political developments in Michigan, along with the implementation of the federal Every Student Succeeds Act (ESSA), provided an opportunity for Superintendent Whiston to take a new tack in turning around the state's lowest performing schools. Superintendent Whiston's vision was centered on an approach to turnaround that emphasized school districts working to increase their capacity to improve student outcomes via support from the Michigan Department of Education (MDE) as well as a constellation of stakeholders within the community the district served.

Under the Partnership Model, the state's lowest performing schools were labeled "Partnership schools" and their districts, which were charged with developing and leading improvement efforts in identified schools, were labeled "Partnership districts." Partnership districts then worked with school and district leadership, a liaison from the Office of Partnership Districts (OPD) at MDE, and community stakeholders to develop a Partnership Agreement that analyzed the district's strengths and weaknesses, identified improvement goals to be met over 18- and 36-month timeframes, outlined strategies and reforms to meet those goals, and prescribed consequences for failing to meet those goals. After local stakeholders and MDE approved a Partnership district's Partnership Agreement, the district then implemented the Agreement over the ensuing three academic years with support from its Intermediate School District (ISD)/Regional Educational Service Agency (RESA)[2], identified partners in its community, and OPD.

To date, the state has identified three rounds of Partnership schools—one each in spring 2017, fall 2017, and spring 2018. However, because the implementation and evaluation timelines for schools identified in rounds 2 and 3 are the same, we consider them together as Cohort 2, and label schools identified in round 1 as Cohort 1. In total, 123 schools across 35 districts have been identified for Partnership. Over time, 25 schools and nine districts have exited Partnership for various reasons, leaving 98 schools and 26 districts operating under Partnership Agreements. Appendix A contains a list of identified schools and their districts for each round and cohort of Partnership. MDE intended to identify a fourth round of Partnership schools in fall 2021. However, due to disruptions to standardized testing and school and district operations stemming from the COVID-19 pandemic, the selection of a new round of Partnership schools was delayed and is currently planned for fall 2022. Similarly, Cohort 1 districts that would have exited Partnership status in 2021 have agreed to remain in Partnership through the 2021-22 school year to continue receiving supports from OPD and additional funds.

Figure 1.1 shows the Partnership Model's Theory of Change. The model has evolved over time, but much of its original intent is still in place.

FIGURE 1.1. Partnership Model Theory of Change

STATE CONTEXT

LOCAL CONTEXT

IDENTIFIED BY MDE AS LOW-PERFORMING

PARTNERS

MDE/OPD

> **LIAISON**
  - navigators
  - communication brokers
  - neutral facilitators

> Teacher & Leader Instruction Support Grant
> 21h Grant
> Referrals to other/offices departments
> Regional Assistance Grant to ISD

ISD
> **Professional development**
> **Training**
> **Coaching**

COMMUNITY
> Advice & expertise
> Additional resources

PARTNERSHIP AGREEMENT DEVELOPMENT & IMPLEMENTATION

> District as driver of change
> Comprehensive needs assessment
> Draft academic and non-academic 18- & 36-month goals
> Develop turnaround strategies
  - Aligned with district/school context
  - Aligned with 18- & 36-month goals
  - Align with supports from MDE & ISD
> Identify community partners

AMENDMENT OF THE PARTNERSHIP AGREEMENT

If the district or MDE sees a deficiency in the Partnership Agreement, its 18-month benchmarks may be amended

EVALUATION PROCESS

> Review of Goal Attainment at 18 mo.
> Evaluation of Partnership Agreement at 36 mo.

NEAR-TERM OUTCOMES

DISTRICT
Improved systems with greater capacity to support core district functions

> Human resources
> Curriculum
> Instructional systems (e.g., professional development)
> Operations
> Data use

SCHOOL
Improved functioning of instructional core

> Improved instruction
> Goals aligned with turnaround strategies & interventions
> Use of data & metrics to inform & evaluate improvement

INTERMEDIATE OUTCOMES

Increased educator retention

Consistent, high-quality instruction

More efficient use of resources

LONG-TERM OUTCOMES

IMPROVED ACADEMIC OUTCOMES

> Higher achievement
> Reduced dropout

IMPROVED WHOLE-CHILD OUTCOMES

> Attendance
> Behavior

DISTRICT-DETERMINED CONSEQUENCES FOR FAILURE TO IMPROVE:

> Reconstitution
> Restart
> ISD takeover
> CEO appointed

The Partnership Model conceives of low performance at the school level as symptomatic of issues at the district level. As such, the Partnership Model is a district-level intervention that aims to provide support for the local educational agencies (LEAs) that operate identified low-performing schools.[3] When a school is designated as a Partnership school, the LEA that operates it is designated as a Partnership district to enact and oversee the turnaround of the identified Partnership school(s). Just over half (56%) of Michigan's Partnership districts are charter schools (called public school academies, or PSAs, in Michigan, though we refer to them as charter schools in this report), though traditional public school (TPS) districts operate 86% of Partnership schools.

In the case of TPS Partnership schools, their parent district is charged with leading their turnaround. In the case of charters, different entities may serve as the Partnership district, often their central office or educational service provider—sometimes referred to as an educational management organization (EMO) or management company.

After a district is identified for Partnership, a series of supports becomes available to guide turnaround work in identified schools. At the state level, these include a Partnership Agreement Liaison from MDE to provide individualized supports to district leadership along with access to several grants available only to Partnership districts. At the regional level, districts receive greater support, typically in the form of professional development and various forms of coaching, from their ISD—a regional educational agency that exists between districts and MDE—related to their needs. At the local level, Partnership districts are encouraged to reach out to organizations in the community, such as civic organizations, the local business community, and community health agencies, for additional supports. The original Theory of Change conceived of local partners as key players in Partnership districts' turnaround efforts, but the local organization role was de-emphasized during implementation.

Drawing on the above constellation of supports, Partnership districts develop a Partnership Agreement that serves as a contract between themselves and MDE to improve student outcomes over a 36-month period. This process begins with the district conducting a comprehensive needs assessment to identify the strengths and weaknesses of its Partnership schools as well as the district itself. The district then uses findings from the needs assessment to identify for each of its Partnership schools:

• academic and non-academic improvement goals to be met over 18- and 36-month time periods;

• strategies aligned with those improvement goals;

• supports the district will receive from state, regional, and local partners; and

• accountability measures to be implemented if improvement goals are not met.

After the Partnership Agreement is drafted, the district administration is asked to approve it, along with its ISD, MDE, and key community partners selected by the district. Once approved, the Agreement is implemented beginning in the following school year, though it may be

amended if MDE deems part of it deficient during implementation. To monitor Partnership districts' progress toward the goals outlined in their Partnership Agreements, MDE conducts an interim evaluation after 18 months of implementation. Partnership districts that are found to be "off-track" at that juncture must implement additional strategies to foster improvement as well as undergo another evaluation at 24 months of implementation. Partnership districts' final evaluations are conducted at 36 months, at which point the schools that achieve their goals are released from Partnership status and the schools that fail to meet their goals face accountability measures spelled out in their Agreements.

The aim of the Partnership Model is to foster improvement in district-level systems that in turn supports sustained improvement at the school level, particularly in identified Partnership schools. This process should lead to intermediate outcomes such as increased educator retention and higher quality instruction and eventually to improved academic and whole-child outcomes for students. Ideally, this improvement will then continue beyond the time period covered by the Partnership Agreement.

Characteristics of Students Enrolled in Partnership Schools

As is the case across the country, Michigan's lowest performing schools and districts have different characteristics than do districts that perform at higher levels on state standardized achievement tests and are not identified for turnaround (Sun et al., 2020). In our Year One and Two reports, we described in detail the different contexts in which Partnership schools and districts were working. The communities in which Partnership districts are located have fewer adults who have completed high school and college, are substantially lower income and higher poverty, and have lower labor force participation. Far fewer children in Partnership communities live in two-parent households or have health insurance.[4]

Given these disparities, it is not surprising that Partnership schools enroll higher proportions of economically disadvantaged students. As is shown in Table 1.1, 91% of Partnership school students are economically disadvantaged, compared with 87% of students in comparison schools and just 57% in Michigan's higher performing schools that were not identified or nearly identified for Partnership. Because in Michigan, communities with high proportions of Black residents also tend to be those with the lowest levels of economic resources (Annie E. Casey Foundation, 2019), it follows that the far majority of students in Partnership schools are Black; 90% of Cohort 1 and 82% of Cohort 2 Partnership school students are Black, compared with 57% of comparison school students and just 14% of students in higher performing schools. In contrast, fewer than 10% of Partnership school students are White as opposed to the 70% of students who are White in the state's higher performing schools. Partnership schools enroll slightly greater proportions of students with disabilities than do comparison schools, but are approximately the same as the remainder of the state. Partnership schools enroll lower proportions of Latinx or Hispanic students and English learners than do comparison or higher performing schools in Michigan. This is likely because Partnership schools are for

the most part located in urban settings and the state's Latinx or Hispanic and English learner populations largely live in rural and suburban areas.

TABLE 1.1. School-Level Student Characteristics by Partnership Status					
	Cohort 1		Cohort 2		All
	PARTNERSHIP	COMPARISON	PARTNERSHIP	COMPARISON	OTHER
Economically disadvantaged	91.9%	86.9%	91.4%	86.8%	57.3%
English learner	2.8%	10.7%	4.4%	9.3%	5.9%
Black	90.3%	56.8%	81.6%	57.0%	14.0%
Latinx or Hispanic	4.6%	11.8%	6.5%	8.8%	8.1%
Other non-White	2.5%	6.0%	3.6%	5.4%	8.3%
White	2.6%	25.5%	8.3%	28.8%	69.6%
Special education	17.5%	15.3%	17.6%	14.8%	18.8%

Note: School-level means from 2019-20 school year. The "other" category includes schools not in either the treatment or comparison groups.

Together, these data present a clear picture of the populations that live and learn in the communities served by Partnership schools and districts. They are the children and adults who have been most traditionally underserved by public institutions both in Michigan and across the country. Notably, these communities were disproportionately affected by the COVID-19 pandemic, a topic we will delve into further in Section Three of this report.

FOCUS OF THE THIRD ANNUAL REPORT

In the earlier years of this study, we set out to answer questions related to the efficacy of the Partnership Model of school and district turnaround. We wanted to understand whether the model was working to achieve its near- and longer-term goals of improving school and district operations, and eventually student outcomes. We studied the model's implementation so that we might better understand how educators understood and conceived of Partnership interventions, and how the ways Partnership played out in classrooms, schools, and districts might affect the model's success.

However, K-12 education—in Michigan, across the country, and across the world—was dramatically affected by the onset of the COVID-19 pandemic in the spring of 2020 and its continuation throughout the entire 2020-21 school year. Similarly, research about school and district improvement models in K-12 education was overtaken by questions about how schools and districts were serving their students and communities through a global pandemic. Given this context, it is impossible to understand the Partnership Model and its implementation and outcomes in the 2019-20 and 2020-21 school years apart from the pandemic's dramatic and devastating disruptions to schooling. Therefore, in our Year Three Report, we focus on the following questions:

1. How did the COVID-19 pandemic affect Partnership schools and districts?

2. How did student outcomes differ in Partnership relative to near-selected schools during the 2019-20 school year?

3. How have Partnership schools and districts experienced shifts in enrollment, funding, and student attendance in the 2019-20 school year?

4. How have accountability, culture and climate, and human capital been affected by the Partnership Model of school and district turnaround and the COVID-19 pandemic?

In addition, in previous years, we have included case studies of Partnership schools and districts. However, due to COVID-19 restrictions to research and a general sense that researchers should work to avoid any further disruptions to students' learning and schools' and districts' operations during the incredibly challenging circumstances of the 2020-21 school year, this year's report does not include data from case studies. This necessarily means that we miss some of the important voices and nuance provided by deep qualitative work.

SUMMARY

The Partnership Model was implemented to help some of Michigan's lowest performing schools and districts turn around and improve school and district operations and eventually educator and student outcomes. However, as it did for districts across the country, the COVID-19 pandemic disrupted ongoing improvement efforts and wreaked havoc on the educational opportunities for students enrolled in these districts—even as students and educators made extraordinary efforts to continue learning and teaching. In this third year report, we examine how Partnership schools and districts have fared during these tumultuous times.

SECTION ONE NOTES

1. Cohort 1 Partnership schools were selected in 2016-17 after being identified as Priority Schools for the three consecutive years through 2015-16. Cohort 2 Partnership schools were selected in 2017-18 in two rounds. The first (Round 2) included schools that were low performing in 2015-16 and had continued trending downward in 2016-17. The second (Round 3) included all schools in the bottom 5 percentiles on the state's school index system in 2016-17. Comparison schools for Cohort 1 include all 2015-16 Priority Schools that were not identified in any round of Partnership. Comparison schools for Cohort 2 include all schools between the 6th and 10th percentiles on the state's school index system in 2016-17.

2. Hereafter, all references will only mention ISD as this is the more common term used among policymakers.

3. As described in endnote 1, not all low-performing schools based on 2015-16 outcomes were identified for Partnership; rather, Round 1 comprised just those schools that were low performing for three straight years through 2015-16 (i.e., persistently low performing) and Round 2 was made up of a subset of schools that were low performing in 2015-16 in addition to trending downward in 2016-17. Round 3 does include the full set of low-performing schools in 2016-17 (defined by federal law as the bottom 5% on the state's school index system).

4. More detail can be found on pages 2-6 of the Year Two Partnership Report.

**Partnership Turnaround:
Year Three Report**

SECTION TWO:
DATA & METHODS

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Section Two:
Data and Methods

INTRODUCTION

To examine the effects of the Partnership Model and better understand the experiences of educators and students in Partnership schools and districts, we use a mixed methods triangulation design (Creswell & Plano Clark, 2017) that includes multiple types of data and methods of analysis. By integrating analyses of varied sources of qualitative and quantitative data, we are able to paint a rich picture of how the Partnership Model has been implemented, the effectiveness of the reform along multiple intended outcomes, and the ways in which COVID-19 permeated the educational experiences of Partnership educators and students. This approach is especially valuable in looking back at a year that was upended by a pandemic, with state accountability exams canceled in 2019-20 and administered unevenly in 2020-21, intended reform outcomes muddled by a public health emergency, and many, if not most, students attending school remotely rather than in person for the majority or all of the school year.

As shown in Table 2.1, we use the following data sources in the third year of our evaluation of the Partnership Model:

- Statewide administrative data

    o Student administrative data records,

    o Educator administrative data records,

    o District funding data, and

    o School enrollment data.

- Surveys of educators working in Partnership schools and districts

    o Teacher surveys and

    o Principal surveys.

- COVID-19-related data

    o COVID-19 case, death, and positivity rate data and

    o Instructional modality plans submitted by district leaders.

- Interviews with Partnership district and charter leaders

The administrative data analyses for this report draw from data that tracked student and educator outcomes through the 2019-20 school year (Cohort 1's third implementation year and Cohort 2's second implementation year). For student and educator mobility outcomes and district funding, we also use fall 2020 data to measure whether students and teachers left their schools, districts, or

Michigan education at the end of the 2019-20 school year. The analyses of school-level enrollment draw from data that are available through fall 2020.

The survey and interview analyses for this report draw on district and charter leader interviews conducted in the 2020-21 school year (the fourth year of the reform) and educators' responses to surveys administered in spring 2021. In many cases, we also draw from educator survey responses from the first two years of the study—administered in fall 2018 and fall 2019.

While in total there have been 37 Partnership districts and 123 Partnership schools, several schools and districts exited the model, leaving 26 districts and 99 schools in the 2020-21 school year.[1]

The remainder of this section describes each data source and the analytic methods used to examine the implementation and effects of the Partnership Model as well as the descriptive experiences of students and educators in Partnership schools and districts during the COVID-19 pandemic.

SUMMARY OF DATA SOURCES

TABLE 2.1. Data Sources					
Data	**Outcomes of Interest**	**Source**	**Year(s)**	**Sample Size**	**Subgroups**
STATEWIDE ADMINISTRATIVE DATA					
Student administrative records	Mobility High school graduation and dropout rates Student achievement (through 2018-19 only)	MDE and CEPI	2013-14 through fall 2020	Full Panel: 10,475,145 student-year observations Event study analysis: 1,132,033 student-year observations	**Cohort 1:** Round 1 Partnership schools (treatment) and 2016 Priority schools that are not part of Cohort 1 or 2 (comparison) **Cohort 2:** Round 2 and 3 Partnership schools (treatment) and other schools that were in the 1st-10th percentile of the Michigan Index System in 2017 but not part of Cohort 1 or 2 (comparison)
Educator administrative records	Mobility out of school and district Exit from teaching profession	MDE and CEPI	2013-14 through fall 2020	Full panel: 626,238 teacher-year observations Event study analysis: 50,601 teacher-year-observations	Cohort 1 and Cohort 2 treatment and comparison schools
District revenue data	Federal, state, local, and other revenues	MDE and CEPI	2013-14 through 2019-20	5,805 district-year observations (838 unique districts)	Partnership districts and non-Partnership districts
School enrollment data	School-level student enrollment	MDE and CEPI	2013-14 through 2020-21	27,853 school-year observations (3,901 unique schools)	Cohort 1, Cohort 2, comparison schools for both cohorts, all other public schools in the state

TABLE 2.1. Data Sources (continued)					
Data	**Outcomes of Interest**	**Source**	**Year(s)**	**Sample Size**	**Subgroups**
SURVEY DATA					
Teacher surveys[1]	Perceptions and experiences in Partnership schools and districts	EPIC-developed survey	Fall 2018 Fall 2019 Spring 2021	**Fall 2018:** 2,718 participants (38.3% response rate) **Fall 2019:** 3,224 participants (49.2% response rate) **Spring 2021:** 2,342 participants (38.5% response rate)	Partnership schools and non-Partnership schools in Partnership districts Cohort 1 and 2 Partnership schools Traditional public schools and charter schools
Principal surveys[1]	Perceptions and experiences in Partnership schools and districts	EPIC-developed survey	Fall 2018 Fall 2019 Spring 2021	**Fall 2018:** 81 participants (28.6% response rate) **Fall 2019:** 88 participants (37.8% response rate) **Spring 2021:** 116 participants (46.6% response rate)	Partnership schools and non-Partnership schools in Partnership districts Cohort 1 and 2 Partnership schools Traditional public schools and charter schools
COVID-19 RELATED DATA					
Case, death, and positivity rates	County-level COVID-19 cases and deaths per 100,000 population, test positivity rates	MDHHS	Daily, April 2020 through June 2021	83 counties (11 with Partnership districts)	Counties with Partnership districts and counties without Partnership districts
Instructional modality plans	District monthly plans to educate students fully in-person, fully remote, or in hybrid format	Reconfirmed Extended COVID-19 Learning (ECOL) Plan Monthly Questionnaire	Monthly, Sept. 2020 through May 2021	799-814 districts per month (26 Partnership)[2]	Partnership and non-Partnership districts
INTERVIEW DATA					
District leadership interviews	Perceptions of Partnership implementation	Interviews conducted by EPIC researchers	January 2021 through March 2021	18 interviews (69% response rate) **By TPS vs. charter:** 64% TPS (N=7) 73% PSA (N=11) **By cohort:** 67% Cohort 1 (N=4) 70% Cohort 2 (N=14)	TPS/district superintendents or leaders coordinating Partnership work PSA/charter school superintendent, principals, or leaders coordinating Partnership work

[1] *Teacher and principal surveys administered to teachers and principals in all schools in Partnership districts, regardless of individual schools' Partnership status.*

[2] *One Partnership district, Insight School of Michigan, a fully virtual district, is not included in analyses from these plans because it was remote prior to the pandemic.*

Throughout the report, we refer to three different groups of schools other than Partnership schools. When describing event study results from administrative data, we reference "comparison schools," which are the schools described in the subgroups column above for the student administrative records row. These are the subsets of low-performing schools that serve as comparison groups in the event studies. In some cases, we contextualize information about Partnership schools by providing averages for "all other schools in the state." These include all schools that were not designated as Partnership in any round. Finally, in describing survey data, we refer to "non-Partnership schools in Partnership districts" on the first reference in each section and then as "non-Partnership schools" on all subsequent references. In these cases, "non-Partnership schools" refers to non-Partnership schools in Partnership districts, as described under Survey Data in Table 2.1 above.

STATEWIDE ADMINISTRATIVE DATA

Sample

Statewide administrative data include longitudinal data on students and teachers, district-level funding, and school-level enrollment.

To examine student and teacher mobility in Partnership schools, we use administrative data records on Michigan K-12 students and public school teachers MDE and the Center for Educational Performance and Information (CEPI) provided from 2013-14 through fall 2020. We define public school teachers as public school employees (both TPS and charter) whose primary position is as a teacher.[2] The student analyses in this report draw from data on race, ethnicity, gender, school placement, special education status, English learner status, socioeconomic status,[3] and high school graduation/dropout status when applicable. The teacher analyses in this report draw from credential information, years of experience, teaching assignment, and school assignment.

This report focuses on students and teachers in Cohort 1 and Cohort 2 Partnership schools, relative to those in a set of similar comparison schools.

Cohort 1 Partnership schools are the 37 schools that were identified as Priority schools in each of the three years from 2014–2016. These schools were identified as Partnership in fall 2016 and the first year of Cohort 1 Partnership implementation was 2017-18. We compare students and teachers in Cohort 1 schools with those in 2016 Priority schools that were not identified as either a Cohort 1 or 2 school. We choose this comparison group because Cohort 1 Partnership schools were drawn from Priority schools, so Priority schools that were not selected for Partnership represent the closest comparison based on academic outcomes. Collectively, data used for analyses of Cohort 1 included approximately 293,958 student-year observations (51,580 unique students) and 20,447 teacher-year observations (7,078 unique teachers).

Cohort 2 Partnership schools are the 86 schools that were selected as Round 2 (41 schools) or Round 3 (45 schools) Partnership schools. Both rounds 2 and 3 were identified in the 2017-18 school year and their first year of implementation was 2018-19. Round 2 schools were identified based on low performance in 2015-16 and continued declining performance in 2016-17. Round 3

schools are the state's first Comprehensive Support and Improvement (CSI) schools under ESSA, which are those in the bottom 5% of the Michigan School Index System, which ranks schools by their composite score on an index drawing from a variety of school effectiveness measures. We analyze rounds 2 and 3 together as "Cohort 2" because they share an implementation timeline. We compare Cohort 2 students and teachers with those in schools below the 10th percentile on the Michigan School Index System in 2017 that were not selected for either cohort of Partnership. Since Round 3 schools were selected as the bottom 5% on this index, the comparison group therefore represents the next-lowest-performing schools in the state. Cohort 2 data include approximately 517,443 student-year observations (9,113 unique students) and 34,720 teacher-year observations (11,718 unique teachers).

We exclude Cohort 1 Partnership schools from the Cohort 2 comparison group and vice-versa. The comparison schools that were not selected for Partnership were otherwise quite similar to Partnership schools in terms of academic achievement and other observable characteristics (as we showed in the Year Two Report, Table 2.3). However, while Partnership schools underwent reform, comparison schools continued with business as usual, meaning their post-reform trajectory provides the best approximation of Partnership schools' outcomes in the absence of the reform.

To examine school funding, we use district-level revenue data from all districts in the state from 2013-14 through 2019-20. Because funding data are district level, we explore differences for Partnership districts and non-Partnership districts. For analyses based on enrollment, we use school-level enrollment data, overall and by grade level, for Cohort 1 Partnership schools, Cohort 2 Partnership schools, comparison schools for both cohorts pooled together, and all other schools.

In all administrative data analyses, we define Partnership schools as those that were ever identified as Partnership, even if they have since exited Partnership status.

Student Administrative Records

Outcomes

While the Year Two Report examined the effects of Partnership on student achievement outcomes through the 2018-19 school year, there were no Michigan Student Test of Educational Progress (M-STEP) assessments in 2019-20 due to the COVID-19 pandemic. This report therefore focuses largely on those outcomes that can be measured at the end of the 2019-20 school year: student mobility, high school graduation, and high school dropout. We also use student achievement data through 2018-19 to examine the pre-COVID-19 effects of Partnership on subgroups of students and schools.

Student mobility. We measure student mobility in three ways—leaving the school, leaving the district, and leaving Michigan public education, all relative to staying in their current school. These measures are nested; a student who leaves their district necessarily also leaves their school, and a student who leaves Michigan public education necessarily leaves both their district and school. To code student mobility, we observe whether a student has the same school (or district) assignment in the following year. Students who move to a new school within the same district are coded as leaving their school, those who move to a new school in a new district are coded as

leaving their school and leaving their district, and those who drop out of the dataset of all Michigan public school students are coded as leaving their school, district, and Michigan public education. Students who remain in the same school are coded as non-mobile. We do not count students who make structural moves (i.e., those who move to a new school due to reaching the highest grade level in their current school, those whose school closed, and those who graduate from high school) in any of these categories.

High school graduation and dropout. We calculate high school graduation and dropout based on the exit status of a student at the end of their expected graduation year. Graduation therefore reflects completion of high school in four years.[4]

Student achievement. In Special Section A only, we draw from student achievement scores on standardized math and ELA assessments given to all 3rd-8th and 11th grade students each year from 2013-14 through 2018-19. To account for changes to the assessments over time, we standardize scores by grade, year, and subject. We do not have achievement data from the 2019-20 school year due to the COVID-19 pandemic.[5]

Other Variables

In analyses using student data, we also include student demographics (race, gender), grade level, socioeconomic status, English learner status, and status as a student with a disability to adjust our estimates of the Partnership effect by each of these categories. We also control for school-level characteristics of the student body, including race/ethnicity, economic disadvantage, English learner status, special education status, and school enrollment.

Teacher Administrative Records

In this year's report, we focus on teacher mobility, a particular concern for low-performing schools such as Partnership schools, which tend to grapple with high rates of teacher turnover—and an especially salient issue during and after the COVID-19 pandemic due to teacher health and safety concerns.

Outcomes

In this report, we focus only on teacher mobility outcomes. While the Year Two Report also examined the effects of Partnership on teacher evaluation ratings, we do not have complete teacher evaluation data for the 2019-20 school year because the state waived evaluation requirements for most teachers due to the pandemic.[6] We measure teacher mobility in the same ways as student mobility—leaving the school, leaving the district, and leaving Michigan public education, all relative to remaining in the same school. Again, the three measures are nested in one another, with those who leave their districts also leaving their schools, and those who leave Michigan public education also leaving their districts and schools.

Other Variables

We examine teacher mobility for a subgroup of teachers based on race and ethnicity, gender, experience level, and retirement eligibility. Race and ethnicity subgroups include White, Black, Hispanic or Latinx (of any race category), and other non-White. Gender subgroups are female and male. Experience level subgroups include 0-3 years, 4-15 years, and 16 or more years of

teaching experience.[7] We classify a teacher as retirement-eligible if they have 30 or more years of experience or they are at least 60 years old with 10 or more years of experience.[8] In analyses using teacher data, we also include demographics (race, gender), years of teaching experience, and educational attainment.

District Revenue Data

The district revenue data contain transaction-level information on all district revenues from the 2013-14 through 2019-20 school years. The transaction-level data include the total amount of the revenue and a major class code, which classifies the revenue item, including whether it comes from a federal, state, local, or other funding source. We total all transactions by district and year coming from federal, state, local, or other sources.

School Enrollment Data

We use student enrollment data from the state's Student Enrollment Counts report, which provides the total student headcount per school. We include fall enrollment data from the 2013-14 through 2020-21 school years to create a dataset of annual school-level total enrollment and grade-level enrollment through the beginning of the 2020-21 school year. In the analyses shown in this report, we restrict the sample to just those schools that were open and enrolled students for all eight years of that time period.

Research Design

Descriptive Analyses

This report includes a number of descriptive analyses across each of the different administrative data sources. For the enrollment and funding analyses in particular, we focus exclusively on descriptive analyses.

Enrollment. Using the school-level enrollment data, we calculate the total school enrollment for Cohort 1, Cohort 2, comparison (both cohorts 1 and 2 comparison groups combined), and all other schools by year from 2013-14 through fall 2020. We do so separately for specific grade-level bands—kindergarten, grades 1–5 (elementary non-kindergarten), grades 6–8 (middle), and grades 9–12 (high school)—in each school year. We focus on kindergarten separately because news reports have suggested that parents delayed enrolling students in kindergarten due to COVID-19 (Belsha, 2020; Knowles, 2021). To the extent that parents delayed enrollment, any declining enrollment would be driven at least in part by lower kindergarten enrollment. We then divide the total enrollment for a given group (i.e., Cohort 1, Cohort 2, comparison, and all other schools) into the 2013-14 enrollment for the same group. This calculation provides enrollment as a share of total enrollment in the 2013-14 school year.

Funding. The district funding data allow us to calculate the total funding by funding source for Partnership and non-Partnership districts each year from 2013-14 through 2019-20. Specifically, we sum the total funding from local, state, federal, and other funding sources for each district in each year. We then divide that total by the district enrollment to determine the revenue per

student. We calculate the per-pupil means for Partnership districts and non-Partnership districts, respectively, in each year. Finally, we convert each of these numbers to 2020 dollars to allow for comparisons over time.

Event Study Models

To calculate the effect of Michigan's Partnership Model on student and teacher mobility, graduation rates, and dropout rates, we conduct event study models comparing these outcomes before and after Partnership implementation. Intuitively, this approach allows for the comparison over time of a treatment group—in this case, students, teachers, and schools under Partnership— with a comparison group that shares many of the same characteristics. The use of comparison groups whose outcomes are observed before and after treatment typically allows us to attribute post-Partnership differences to the Partnership reform itself. However, we caution that any effects in 2020 cannot be attributed entirely to Partnership because COVID-19 may have disproportionately affected Partnership schools, districts, and communities in ways we cannot observe and cannot necessarily account for in our event study models. For example, as we describe in Section Three, COVID-19 disproportionately affected Partnership communities and in some cases even Partnership schools (Cohort 1 in particular). To that end, we view these analyses of the 2020 study outcomes as relevant to understanding the effect of COVID-19 on the state's lowest performing schools—but not necessarily as the effect of the reform.

As a first step in implementing this design, we created a series of lead and lag Partnership "treatment" indicators in the data beginning in 2013-14 and extending through 2019-20, where, for Cohort 1 schools, 2016-17 is the identification year, 2017-18, 2018-19, and 2019-20 are the first through third years of Partnership implementation, respectively, and 2013-14 through 2016-17 are the pretreatment years. For Cohort 2 schools, 2017-18 is the identification year, 2018-19 and 2019-20 are the first and second years of Partnership implementation, and 2013-14 through 2017-18 are the pretreatment years. The student mobility models predict three dichotomous outcomes: leaving the school, leaving the district, and leaving Michigan public education entirely. These models take the form:

Equation 1 (Cohort 1):

$$Mobility_{ist} = \alpha_0 + \sum_{r=-4}^{3} I_{2016\text{-}17+r} + \sum_{r=-4}^{3} I_{2016\text{-}17+r} \times Partnership_{ist} + X_{ist}\theta + \phi_s + \varepsilon_{ist}$$

Equation 2 (Cohort 2):

$$Mobility_{ist} = \alpha_0 + \sum_{r=-5}^{2} I_{2017\text{-}18+r} + \sum_{r=-5}^{2} I_{2017\text{-}18+r} \times Partnership_{ist} + X_{ist}\theta + \phi_s + \varepsilon_{ist}$$

where Equation 1 predicts each student mobility outcome for students in Cohort 1 schools and Equation 2 predicts each student mobility outcome for students in Cohort 2 schools. Both models predict a student mobility outcome (i.e., left school, left district, or left Michigan public education) for student *i* in school *s* in year *t*. In Equation 1, $I_{2016\text{-}17+r}$ represents a series of year indicators from 2013-14 through 2019-20, with 2016-17 (the year of Cohort 1 identification) as the omitted year. In Equation 2, $I_{2017\text{-}18+r}$ represents a series of year indicators from 2013-14 through 2019-20, with 2017-18 (the year of Cohort 2 identification) as the omitted year.[9]

We interacted each of these year indicators with an indicator of treatment status, $Partnership_{ist}$, which denotes whether the student is enrolled in a Partnership school in the observed year. **X** is a vector of student and school characteristics that includes time-variant and invariant student characteristics (economically disadvantaged, English learner, special education, male, Black, Hispanic or Latinx, other non-White, and a series of enrolled grade level indicators with kindergarten as the reference category), time-variant school-level variables (percent economically disadvantaged, English learners, special education, Black, Hispanic or Latinx, and other non-White, and logged enrollment). ϕ_s is a school fixed effect, and ε_{ist} is an idiosyncratic error term clustered at the school level.

To conclude that our post-implementation estimates can be causally attributed to the reform, we should find only small and statistically insignificant coefficients on the interactions between the year and Partnership indicators in the pre-implementation years. The coefficients on these interactions in the years of Partnership (i.e., 2017-18, 2018-19, and 2019-20 for Cohort 1; 2018-19 and 2019-20 for Cohort 2) provide the estimated Partnership effects, though again we caution that the estimates in 2019-20 conflate the effects of Partnership with any disproportionate effects of COVID-19, meaning we cannot attribute the 2019-20 estimate to the Partnership Model alone.

One concern related to the student mobility models may be that the population of students in Partnership schools is different from the population of students in comparison schools in ways that may affect student outcomes. Student fixed effects would account for unobserved differences in models estimating other outcomes (e.g., student achievement outcomes in the Year Two Report), but are not appropriate in student mobility models because we do not observe the same set of students over the full panel. We therefore also estimated two additional sets of models using weights that represent the probability that student *i's* school was assigned to Partnership. The estimates from these models were similar to the unweighted estimates, and we therefore focus in this report on the unweighted approach.

For graduation and dropout, we estimate the school-level graduation and dropout rates and include only the school-level covariates. We exclude from the sample any schools that do not have at least five possible graduates in a given year to avoid bias or imprecision related to random noise aggregated up to the school level.

The models for teacher mobility follow the same format as equations 1 and 2 above, but predict whether a teacher leaves their school, district, or Michigan public education, respectively. In these models, **X** is a vector of teacher and school characteristics, where the teacher covariates include gender (male and female), race/ethnicity (Black, Hispanic or Latinx, other non-White), years of experience, and educational attainment (master's or above).

The student- and teacher-level models are linear probability models because the predicted outcome is binary (it takes a value of 1 if, for example, a teacher leaves their school and a 0 if they stay in their school). To that end, the coefficient estimates can be interpreted as differences in predicted probabilities. In other words, in the teacher models, a coefficient estimate of zero indicates that there is no difference in the probability of leaving for Partnership relative to non-Partnership teachers.

Triple-difference event study models. While the teacher mobility event study models provide estimates of the probability of mobility for the average teacher, there have been concerns in the media that COVID-19 may have led particular groups of teachers to exit teaching (French, 2021; Hess, 2020; Will, 2021). Specifically, it may be the case that retirement-eligible or more experienced teachers were more likely to leave teaching during the pandemic because they were older and therefore more vulnerable, or they had other paid (e.g., retirement) options (French, 2021). In addition, women disproportionately took on new child care responsibilities when schools shifted to remote learning, and therefore may have exited at higher rates (e.g., Camp & Zamarro, 2021; Will, 2021). Black and Hispanic teachers may have been disproportionately affected by the pandemic and may have had to exit teaching as a result (e.g., Hess, 2020). Thus, we estimate the probability of leaving Michigan education for teachers based on experience level, retirement eligibility, gender, and race.

To do so, we run models interacting the treatment and year indicators with the teachers' subgroup. For example, to predict the probability of leaving for retirement-eligible teachers separately from non-retirement eligible teachers, the model for Cohort 1 takes the form:

Equation 3 (retirement eligibility):

$$
\begin{aligned}
Exit_{ist} = \alpha_0 &+ \sum_{r=-4}^{3} I_{2016\text{-}17+r} + \sum_{r=-4}^{3} I_{2016\text{-}17+r} \times Partnership_{ist} \\
&+ \sum_{r=-4}^{3} I_{2016\text{-}17+r} \times RetirementElig_{it} \\
&+ \sum_{r=-4}^{3} Partnership_{ist} \times RetirementElig_{it} \\
&+ \sum_{r=-4}^{3} I_{2016\text{-}17+r} \times Partnership_{ist} \times RetirementElig_{it} \\
&\times RetirementElig_{it} + X_{ist}\theta + \phi_s + \varepsilon_{ist}
\end{aligned}
$$

where *RetirementElig* is an indicator that takes a value of 1 if teacher *i* is retirement-eligible in year t. The two-way interactions between the year indicators and retirement eligibility (i.e., the terms in the third summation operator) provide the estimated deviation in the probability of exiting Michigan public education for retirement-eligible teachers in a given year relative to retirement-eligible teachers in the omitted reference year. To the extent that COVID-19 induced exits among retirement-eligible teachers in the full sample (i.e., Partnership and comparison schools), the coefficient estimate on the interaction between retirement-eligible and the 2019-20 year indicator would be positive and significant.

The three-way interactions between the year, Partnership, and retirement-eligibility indicators (i.e., the terms in the fifth summation operator) provide the estimated deviation in the probability of leaving Michigan education for retirement-eligible teachers in a given year relative to the omitted reference year. To the extent that the COVID-19 effect for retirement-eligible teachers is larger in Partnership schools, the coefficient estimate on the three-way interaction with the 2019-20 school year would be positive and significant.

To better interpret estimates from these models, we take the sum of relevant coefficients representing the probability of exit in 2019-20 for teachers who were:

- **Retirement-eligible** in 2019-20 relative to teachers who were retirement-eligible in the omitted reference year in **comparison schools**;

- **Not retirement-eligible** in 2019-20 relative to teachers who were not retirement-eligible in the omitted reference year in **comparison schools**;

- **Retirement-eligible** in 2019-20 relative to teachers who were retirement-eligible in the omitted reference year in **Partnership schools**; and

- **Not retirement-eligible** in 2019-20 relative to teachers who were not retirement-eligible in the omitted reference year in **Partnership schools.**

The comparison school estimates (first two bullets) provide the estimated change in probability of exiting teaching for a given subgroup of teachers relative to similar teachers in the same comparison school in the Partnership identification year. The Partnership estimates (third and fourth bullets) provide the estimated change in probability of exiting teaching for a given subgroup of teachers relative to similar teachers in the same Partnership school in the identification year. We can therefore think of these estimates as the effect of COVID-19 on exiting teaching for the subgroup of interest and the differential effect in Partnership schools, respectively.

We calculate these linear combinations and their associated standard errors and graph the estimated change in probability of leaving in the 2019-20 school year separately for each group.[10] We take a similar approach for teachers by teaching experience (0-3 years, 4-15 years, 16+ years), gender (male and female), and race/ethnicity (Black, Hispanic or Latinx, other non-White, White).

Student achievement event study models. In Special Section A, we estimate event study models separately for students who were low achieving in their cohort's identification year and students who were not low achieving that year. Specifically, we classify students as low or higher achievers within their school based on the M-STEP score in their cohort's identification year. We classify students as low achievers if they were in the bottom quartile of their school's achievement in the identification year for math or ELA, and as higher achievers if they were in the top three quartiles.[11]

We then estimate separate event study models similar to those described above, with two differences. First, we assign students to treatment or comparison based on their school assignment in cohort identification year. Second, we include a student fixed effect and exclude non-time-varying student-level covariates (i.e., race/ethnicity, gender).

As in the Year Two Report, we show models predicting student achievement gains. We note that the true effect is bound by estimates from two models—the version we show that predicts achievement gains and a version that predicts achievement levels. While we illustrate gains only for simplicity, we provide coefficients from both sets of models in Appendix C.

SURVEY DATA

Data Source

A key component of EPIC's multi-year study of the Partnership Model is an annual survey of teachers and principals in Michigan's Partnership districts. To date, we have conducted three waves of educator surveys, in fall 2018, fall 2019, and spring 2021. In each of these waves (as well as in future years), the goal is to survey all teachers and principals in Partnership districts about their experiences, perspectives, and opinions on what is happening in their schools and districts. Because an aim of the Partnership Model is for districts to direct their efforts and resources toward their lowest performing schools (that is, their Partnership schools), it is important to survey those who work in identified Partnership schools as well as those who do not. This approach allows us to gain insight into the different experiences of educators in Partnership and non-Partnership schools both within a given year and over time.

To conduct the educator survey, we worked with MDE and with the leadership of Partnership districts to identify the population of teachers and principals in Partnership districts and to obtain the contact information to administer the survey. We administered this year's survey in February through March of 2021. For the first two years, we administered the survey between late October and early January in both waves. We adjusted survey timing in the third year to better accommodate the state's existing data collection and delivery schedule. In the first wave of the survey, educators had the option to complete the survey electronically or in paper-and-pencil format, though the overwhelming majority opted to participate electronically. The last two waves of the survey were administered exclusively in an electronic format.

In all three years, teachers and principals in cohorts 1 and 2 Partnership districts received the surveys. Table 2.2 provides the number of eligible teachers and principals who received the survey and the percentage of those educators who responded to the survey. In the most recent wave, just under 40% of the 6,330 surveyed educators responded. These response rates were higher for principals (47%) than teachers (39%). Response rates were higher in Partnership schools (44% of the 2,569 educators surveyed) than non-Partnership (35% of 3,761), and in charters (52% of 325) than traditional public schools (38% of 6,005). Response rates for cohorts 1 and 2 were relatively similar (47% Cohort 1, 43% Cohort 2). Overall, response rates were lower than in Wave 2, when 49% of the 6,787 educators responded and similar to Wave 1 (38%). Response rates for principals were slightly higher this year than in prior years.[12]

In all three waves of survey administration, surveys focused on the following areas of the Partnership Model and related school and district contexts:

• Understanding and awareness of the Partnership Model;

• Understanding and perceptions of the school and district improvement goals;

• Perceptions of support from various organizations;

• Perceptions of school and district effectiveness and implementation;

• Perceptions of challenges facing school/district, with a particular focus on staffing; and

• School and district culture and climate.

TABLE 2.2. Partnership Survey Sample and Response Rates						
	By Partnership Status		By School Type		By Cohort		TOTAL
	PARTNERSHIP	NON-PARTNERSHIP	TPS	CHARTERS	COHORT 1	COHORT 2	
WAVE 1 (2018-19)							
Teachers	2,641 (42.3%)	4,462 (35.9%)	6,792 (38.0%)	311 (45.0%)	848 (42.6%)	1,793 (42.1%)	7,103 (38.3%)
Principals	99 (28.3%)	184 (28.8%)	264 (25.8%)	19 (68.4%)	30 (16.7%)	69 (33.3%)	283 (28.6%)
Total Wave 1	2,740 (41.8%)	4,646 (35.6%)	7,056 (37.5%)	330 (46.4%)	878 (41.7%)	1,862 (41.8%)	7,386 (37.9%)
WAVE 2 (2019-20)							
Teachers	2,319 (57.1%)	4,235 (44.8%)	6,278 (49.0%)	276 (52.5%)	795 (59.3%)	1,524 (56.0%)	6,554 (49.2%)
Principals	77 (50.7%)	156 (31.4%)	219 (35.6%)	14 (71.4%)	25 (48.0%)	52 (51.9%)	233 (37.8%)
Total Wave 2	2,396 (56.9%)	4,391 (44.4%)	6,497 (48.6%)	290 (53.5%)	820 (58.9%)	1,576 (55.9%)	6,787 (48.8%)
WAVE 3 (2020-21)							
Teachers	2,469 (43.3%)	3,612 (35.2%)	5,774 (37.8%)	307 (51.5%)	835 (46.4%)	1,634 (41.8%)	6,081 (38.5%)
Principals	100 (66.0%)	149 (33.6%)	231 (45.0%)	18 (66.7%)	29 (65.5%)	71 (66.2%)	249 (46.6%)
Total Wave 3	2,569 (44.2%)	3,761 (35.2%)	6,005 (38.1%)	325 (52.3%)	864 (47.0%)	1,705 (42.8%)	6,330 (38.8%)

Note: Figures in cells represent the total number of eligible teachers and principals, respectively, to whom the survey was administered in each wave. These numbers exclude individuals who responded that they were not eligible (i.e., not classroom teachers or principals) or who opted out. Percentages in parentheses represent the share of those who responded at least partially. Partial responses include those that answered at least one question beyond the introductory questions that asked about teaching assignment and experience.

In the second wave of surveys, we added items related to human capital, communication related to the Partnership Model, and improvement goal quality. This year, we scaled back the survey questions that would be less relevant during the pandemic and added questions related to COVID-19. This year's survey included new questions about pandemic-related teaching challenges as well as teacher perceptions and estimates of their student's pandemic-related challenges. It is important to note that responses to the questions about student challenges are perceptions only and are therefore framed by teacher experiences. The figures based on teacher perceptions should therefore be interpreted as teacher perceptions that necessarily include some degree of uncertainty. We also streamlined the survey instrument in order to administer the same survey to TPS and charter educators, where previous rounds involved separate TPS and charter surveys. Ultimately, we ended up with one teacher survey and one principal survey, where many but not all of the items were aligned across the teacher and principal surveys. For example, we only asked teachers about their school leader effectiveness and their classroom challenges related to COVID-19, and we only asked principals about their participation in the Review of Goal Attainment (RGA) process.

Analysis

Item-Level Analyses

We run a number of descriptive analyses of teacher and principal survey responses at the item level. We calculate overall means, and then compare means from this year's survey for educators in Partnership vs. non-Partnership schools, Cohort 1 vs. Cohort 2 Partnership schools, TPS vs. charter schools, and for teachers vs. principals. We also compare Wave 3 with Wave 2 responses. For all comparisons, we evaluate statistical significance using t-tests. We focus in this report on differences that were meaningful in magnitude or pattern (in addition to statistically significant) and do not highlight all small subgroup differences.

We also run analyses using dichotomized response options where relevant. For example, for questions with Likert scale response options (i.e., a five-point scale that includes strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree), we create binary variables taking a value of 1 for those who responded with strongly agree or agree and 0 for those who responded with strongly disagree, disagree, or neither agree nor disagree. We present item-level results in which differences between groups are statistically significant for teachers at minimum (the low principal N limits our power to detect significant differences across principal groups).

Factor Analyses

In addition to examining item-level descriptives, we also conduct factor analyses to create broader constructs from multiple survey items. In order to make comparisons across years, we draw largely from items that were asked on all three waves of the survey. For these items, we stack teacher and principal responses for all three years and conduct exploratory factor analyses (EFA) on subsets of items intended to capture broader constructs using principal components factors.[13] We determine the number of factors using parallel analysis (Horn, 1965), and use orthogonal varimax rotation to identify the separate factors.[14] Because we are interested in comparing subgroups, we examine factor loadings and internal consistency across populations (teachers vs. principals) and survey waves. Ultimately, we make adjustments to ensure meaningful and coherent factors that have (a) acceptable internal consistency based on Cronbach's alpha, and (b) similar factor loadings across subgroups. Table 2.3 summarizes each factor, including the report section where it appears, the question items that contribute to it, the populations on which we calculate it (teachers and/or principals), years (Wave 3 vs. all three waves). We provide the factor loadings and Cronbach's alphas for each construct in Appendix B.

TABLE 2.3. Summary of Constructs				
Construct	Section	Items	Population	Wave(s)
Health care and housing	3 – COVID-19	**Teacher perceptions of challenge for students:** Mental health, access to healthcare, access to mental health care, food insecurity, homelessness	Teachers only	Wave 3 only
Economic and attendance challenges	3 – COVID-19	**Teacher perceptions of student challenges:** Lost socialization opportunities, parent/guardian job loss, parent as frontline worker, new child care responsibilities, inability to attend school consistently	Teachers only	Wave 3 only
Illness	3 – COVID-19	**Teacher estimates of proportion of students who experienced:** Immediate family members contracted COVID-19, other family contracted COVID-19, student contracted COVID-19, student has continued symptoms of COVID-19, disrupted learning due to COVID-19 health issues, socioemotional trauma due to COVID-19	Teachers only	Wave 3 only

	TABLE 2.3. Summary of Constructs (continued)			
Construct	**Section**	**Items**	**Population**	**Wave(s)**
Student learning resources	3 – COVID-19	**Agree with statements:** Students have reliable internet, students have tech resources, students have non-tech resources, students have parents who can help, students have places to learn, students have daily access to meals	Teachers only	Wave 3 only
Instructional resources	3 – COVID-19	**Agree with statements:** I am able to educate students, I have data and information to target instruction, I have resources to serve students	Teachers only	Wave 3 only
Classroom instructional challenges	3 – COVID-19	**Teacher perceptions of classroom challenges:** In-person classroom management, online classroom management, maintaining continuity across modalities, communicating with families, access to supplementary materials, educating students with disabilities	Teachers only	Wave 3 only
Student-teacher relations	3 – COVID-19	**Teacher perceptions of classroom challenges:** Establishing emotional connections with students, building trust with students	Teachers only	Wave 3 only
School academic focus	7 – Accountability	**Extent to which item is a focus in school:** Curriculum and instruction, assessments, data-driven instruction, academic improvement for students on the cusp of state test levels, academic improvement for special populations	Teachers and principals	Waves 1–3
COVID accountability concerns	7 – Accountability	**Concerns about:** Personal accountability for absent students, school accountability for absent students, personal accountability for disrupted learning, school accountability for disrupted learning	Teachers and principals	Wave 3 only
Awareness of and buy-in to improvement goals	B – Educator Perceptions of Partnership	**Agree about improvement goals:** Aware of and understand goals, goals are feasible in three-year timeframe, goals focus on most important issues, goals will help students, we have resources we need to achieve goals, we focus on clear and concrete steps to improve student outcomes, instructional efforts align with goals	Teachers and principals	Waves 1–3
Positive climate and culture	8 –Climate and Culture	**Agree with statements:** School meets academic needs, teachers have strong rapport with students, teachers have high expectations, students are enthusiastic to come to school/learn	Teachers and principals	Waves 1–3
In-school hiring challenges	9 – Human Capital	**Affect ability to recruit teachers:** Ability to offer professional development/support, school climate and culture, student academic performance, student discipline	Principals only	Waves 1–3
Out-of-school hiring challenges	9 – Human Capital	**Affect ability to recruit teachers:** Student attendance, family background, community socioeconomic status, geographic location	Principals only	Waves 1–3
School leadership	9 – Human Capital	**How effectively principal:** Worked with staff to meet curriculum standards, communicated central mission of school, used evidence to make data-driven decisions, worked with community partners, facilitated professional development, encouraged parent engagement, communicated improvement goals and strategies with teachers	Teachers only	Waves 1–3

Note: Bolded text in the third column briefly summarizes the question stem from which the items were drawn. The list following the question stem summarizes the question items included in the factor. The full survey is provided in the online appendix. The factor loadings and Cronbach's alphas for each of these factors are provided in Appendix B.

Drawing from the EFA, we run confirmatory factor analyses (CFA) and generate factor scores for each respondent. These factor scores form the basis for our construct analyses, in which we compare the same groups as the item-level analyses described above in addition to examining each relevant construct over all three survey years. By construction, the factor scores are standardized variables that fall on a normal distribution with a mean of 0 and a standard deviation of 1 across the full sample. To identify differences across groups (i.e., Cohort 1 vs. Cohort 2, Partnership vs. non-Partnership, TPS vs. charter), we conduct t-tests to compare these factor scores by groups. While we examine all comparisons, in this report, we only highlight group differences that are statistically significant.

To illustrate group differences, we transform these factor scores based on the cumulative standard normal distribution and generate percentiles that represent a respondent's score on the normal curve. Therefore, the average respondent would have a factor score of 0, which we would convert to a 50, representing the 50th percentile on the normal distribution. These percentile values are useful in comparing groups but not informative in the aggregate because the average will always be approximately 50. We then take the average of the percentiles within each group we are comparing.

Weighting

In all analyses (both item and construct level), we weight teacher and principal survey 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 within school (for teachers) or district (for principals). We do so based on demographic characteristics (race/ethnicity, gender) for both teachers and principals, certification type (i.e., elementary, secondary) for teachers, and Partnership identification round for principals.

Open Response

The surveys provided a field for teachers and principals to enter open-ended comments. While we did not systematically analyze these comments, we include some quotes from these comments throughout the report to highlight more generalizable findings. We caution that these quotes are not necessarily representative and are included only as purposive examples of quantitative findings.

COVID-19 DATA

Data Source

We retrieved publicly available COVID-19 confirmed case counts, death counts, and test positivity rates from the Michigan Department of Health and Human Services (MDHHS). We convert case and death counts to rates per 100,000 population using the 2019 annual county population estimates from the U.S. Census Bureau. For all three measures, we then calculate seven-day rolling averages for each day in order to account for reporting idiosyncrasies—especially in smaller counties and on weekends and holidays. The state reports cases and deaths beginning March 1, 2020. We therefore construct these seven-day averages beginning March 6 going 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 to date.

The first available case positivity rates vary by county, with the first county reporting positivity rates beginning March 10, 2020 and the final county reporting its first positivity rates March 29, 2020. Most counties began reporting positivity rates between March 16 and March 19, 2020. We report seven-day positivity averages from April 1, 2020 through June 14, 2021.

For student-weighted figures, we use enrollment data from the CEPI Student Count Report.[15]

Analysis

Because case, death, and positivity rate data are collected 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.[16] As a result, the means can be interpreted as representing the experience of the average student in a Partnership or non-Partnership district. We calculate these weighted means over time using rolling seven-day average cases per 100,000 county population, deaths per 100,000 county population, and positivity rates (i.e., percent of COVID-19 tests in the county that came back positive).

INSTRUCTIONAL MODALITY

Data Source

To assess the extent to which Partnership districts were educating students in-person and remotely, we use the state's Extended COVID Learning (ECOL) Plans Monthly Questionnaire, through which districts submitted their plans for instructional modality for each month of the 2020-21 school year.[17] The questionnaire asked districts what percentage of students they planned to instruct fully in person, fully remote, or in hybrid format for each month. For each district in each month from September 2020 through May 2021, we collapse these responses into three mutually exclusive categories. The first category, "in-person option," classifies districts that planned to have any students attending fully in person. The second, "hybrid," classifies districts without a fully in-person option that planned to have any students attending a hybrid model. The final category, "fully remote," identifies districts in which all students attended remotely. We exclude districts that were fully remote before the pandemic.

Analysis

We conduct two analyses related to instructional modality. The first examines district offerings of each instructional modality by showing the percentage of Partnership districts compared with non-Partnership districts offering each of the three modalities to their general education students. The second examines predicted student takeup of each modality. To estimate student takeup, we draw from a question asking districts to specify the approximate percentage of students receiving each modality each month (i.e., less than 25%, 25-49%, 50-74%, 75-99%, and 100%). We combine these responses with district-level student enrollment to estimate the share of all Partnership and non-Partnership students that received each instructional modality.[18] The ranges represent the total student shares based on the low and high ends of the percentage ranges indicated by each district.

INTERVIEW DATA

In the 2020-21 school year, we interviewed leaders of 18 Partnership districts, including district superintendents, charter school leaders, leaders of education service providers, and other district-level leaders identified as working most closely on Partnership planning and implementation efforts. Interviews lasted approximately 45 minutes and were transcribed verbatim for analysis. As in previous reports, pseudonyms were randomly assigned to each district using hockey team names and participants were anonymized. We retained the same names for districts over each year of the study. Throughout this report, we refer to traditional public school district leaders as "district leaders," public school academy or charter school leaders as "charter leaders," and collectively both sets of leaders as "Partnership leaders."

Table 2.4 provides district information by Year 3 interview response status. The first set of rows provides the number of respondents and opt-outs whose RGA found that they were on-track and off-track, respectively.[19] The second set of rows provides context on district size. Of the 26 districts that were in Partnership in the 2020-21 school year, 18 district or charter leaders participated in interviews (about 69%). Eleven of 15 whose districts were on track participated (73%) compared with 7 of 11 whose districts were off track by at least one measure (64%). The districts of participating leaders contain 165 of the 269 schools in current Partnership districts (about 61%) and about 75% of the students.

TABLE 2.4. Year 3 Interview Sample			
	Respondents	**Opt-outs**	**Total**
RGA OUTCOME			
On track	11 (73%)	4 (27%)	15
Off track (any)	7 (64%)	4 (36%)	11
Total	18 (69%)	8 (31%)	26
DISTRICT CHARACTERISTICS			
Total schools	165 (61%)	104 (39%)	269
Total student enrollment	102,206 (75%)	34,451 (25%)	136,657
Average schools per district	8.7	13.0	10.0
Average student enrollment per district	5,379.3	4,306.4	5,061.4

Note: Districts are coded as on-track if they received an "on-track" outcome at their 18-month RGA. Districts were off-track if they had at least one school or benchmark in which the RGA found they were off-track, either with progress or with limited progress.

In certain parts of the report, we provide the number of respondents who perceived something in a similar way (e.g., 11 of 18 Partnership leaders expressed positive views of the Partnership reform). In other cases, we used general terms such as "several," or "many." We only provide an overall number for questions in which we systematically asked the same question to every Partnership

leader. We say "several," "some," or "many," to represent common patterns that emerged from district leaders' experiences. These ideas might have been salient to other Partnership leaders, but may not have emerged in the course of the interview, or we did not specifically follow up with a question on that topic.

Our 2020-21 interviews necessarily focused on how leaders were navigating the challenges of COVID-19, how they continued to work on Partnership and their goals, and understanding how Partnership did or did not factor into their plans, decisions, etc., in the context of the pandemic. We continued to probe to follow up on themes that emerged from the interviews in Years 1 and 2 of the study. For example, we asked questions about issues of teacher recruitment and turnover and perceptions of the reform and associated supports.

We coded interview transcripts using Dedoose software (Version 8.3.35) with a deductive coding scheme that applied some themes from the past year (such as "perceptions of Partnership") and some new categories based on the interview protocols related to navigating the COVID-19 pandemic (e.g., "major equity issues," "perceptions of instructional modality"). For example, "major equity issues" included Partnership leaders' responses to what they viewed as the equity issues their districts and communities were facing due to the pandemic. We were then able to aggregate responses to these codes to inductively identify common patterns, differences, and variations in their responses.

SECTION TWO NOTES

1. Districts exited Partnership for a number of reasons. These included being released from Partnership status by OPD, exiting via a cooperative agreement with MDE, or closing. Individual schools exited when they were closed by their district or local board. Appendix A provides a full list of Partnership schools by district and includes exit status and explanation.

2. Districts report all employees to CEPI along with an assignment code that identifies the type of work they perform for the district. To identify teachers from this larger set of employees, we relied on a set of assignment codes considered by MDE's Office of Educator Excellence to indicate that an individual is a teacher. For the portion of the report using the state's administrative data records, this classification may exclude school personnel who teach on a limited basis but whose primary appointment is in another capacity (e.g., librarians or social workers). We excluded long-term substitute teachers from our analyses. We defined "long-term substitutes" as individuals with teaching assignments whose only credential is a substitute teaching permit. Similarly, principals and assistant principals were identified using an indicator MDE developed to identify school leaders in these categories in the Record of Educational Personnel.

3. The state classifies students as economically disadvantaged if they are determined to be eligible for free or reduced-price meals via locally gathered and approved family applications under the National School Lunch program, in households receiving food (Supplemental Nutrition Assistance Program) or cash (Temporary Assistance for Needy Families) assistance, are homeless, are migrant, or are in foster care.

4. The state typically defines on-time graduation to be in four years; however, the state also counts five-year completion as "on-time" for students in early-middle college programs who earn both their high school diploma and an advanced credential from the early-middle college program. These students are included in our calculation of on time graduates. Per the CEPI rules on graduation and dropout rates, "Students submitted in the MSDS as participating in an early/middle college program have their cohort year increased by one. [Cohort years are the year a student is expected to complete high school.] They have five years to complete high school with a regular diploma AND an associate degree, or other advanced certificate, and be considered 'OnTrack Graduated.' Students who complete only a high school diploma in five years will be considered 'Off-Track Graduated.'" In our measure of on-track graduation, early-middle college students who graduate from high school in their cohort year are counted as a graduate if they have completed with a regular diploma and advanced certificate, and a non-graduate if they do not receive an advanced certificate. They are also counted as a non-graduate if they have not yet graduated in their cohort year.

5. The state assessment for grades 3–8 changed from the MEAP exam to the M-STEP beginning in the 2014-15 school year. The 11th grade assessment changed from the ACT to the SAT beginning in the 2015-16 school year. Beginning in the 2018-19 school year, 8th-grade students began taking the PSAT 8/9 instead of the M-STEP assessment. We accounted for these assessment program changes by standardizing MEAP/M-STEP/PSAT and ACT/SAT scores within subject, grade, and year, so all assessment outcomes are on a common scale.

6. For more information about how educator evaluations were affected by COVID-19, see MDE's guidance here: https://www.michigan.gov/documents/mde/Impact_COVID-19_Educator_Evals_690491_7.pdf.

7. We calculate years of experience as the number of years since the teacher's earliest hire date observed in any district since 2011.

8. This rule draws from minimum age and service requirements for Member Investment Plan (MIP) members to qualify for full retirement benefits.

9. One concern might be that Partnership schools experience an identification year effect on the observed outcome because Partnership identification causes students or teachers to leave Partnership schools. If mobility were unusually high in the identification year and we use the identification year as the omitted reference year, our treatment estimates would be biased downward because they are relative to the omitted year. The coefficient estimates on the year indicators provide evidence that the estimates are not being biased by an identification year effect. Additionally, in the Year Two Report, we provide estimated effects on a number of outcomes moving the omitted reference year to the year prior to identification and show that the estimated effects are largely similar.

10. Retirement-eligible comparison = 2019-20 + 2019-20*Retirement-elig; Non-retirement-eligible comparison = 2019-20; Retirement-eligible Partnership = 2019-20*Partnership*Retirement + 2019-20*Partnership + 2019-20 + 2019-20*Retirement; Non-retirement-eligible Partnership = 2019-20*Partnership + 2019-20

11. We designate students as low or higher achieving separately for each subject. For example, a student who was in the bottom quartile of math achievement but the top three quartiles of ELA achievement would count as a low achiever in the math models and a higher achiever in the ELA models.

12. In addition to fluctuating year-to-year principal response rates, the representation of schools in the principal sample also varied from year to year. Only 11 schools (about 10% of the 2020-21 sample) were represented in all three years of the principal survey data, while 45 (39% of this year's sample) were represented in two of three years. For 59 schools (51%) in the 2020-21 principal survey sample, we only had principal survey responses this year. Given the varying response group, we are cautious in interpreting year-to-year differences in principal perceptions.

13. We also tried principal factors.

14. We also tried quartimin rotations on all factors.

15. See CEPI's Student Count Report, available at: https://www.mischooldata.org/DistrictSchoolProfiles2/StudentInformation/StudentCounts/StudentCount2.aspx.

16. We use analytic weights.

17. See EPIC's monthly analyses of instructional modality plans, available at https://epicedpolicy.org/ecol-reports/, for more information on the Reconfirmed COVID-19 Learning Plan Monthly Questionnaires.

18. For districts that indicated 100% of students received a single instructional modality, we count their entire enrollment in the selected modality. For districts that planned to offer families the choice between modes of instruction or to provide different subsets of students with different instructional modalities, we divide total district enrollment based on the indicated percentage range of students receiving each modality. Districts reporting that they were not providing a particular modality at all were counted as having 0% of students in that modality.

19. Districts could be "on track," "off track with progress," or "off track with limited progress." We collapse the latter two statuses into a single "off track" category.

**Partnership Turnaround:
Year Three Report**

SECTION THREE:
THE ROLE OF COVID-19 IN PARTNERSHIP SCHOOLS AND DISTRICTS

EPIC

**Education Policy
Innovation Collaborative**

Section Three:
The Role of COVID-19 in Partnership Schools and Districts

"I think, what keeps me up the most, and this [isn't just a] Partnership issue, but it's a [school district] issue, is when we already knew there were learning gaps, the pandemic has exacerbated that. That started with the digital divide. Then students are predominantly learning online across the country, suburban rich, middle-class, poor. What's happened during that process is the online learning process has not been able to be implemented at the highest level because families are not in a position to actively support their kids, and children themselves aren't in a place as far as their skills, their knowledge, their comfort to learn online. The gap widened a bit initially because of the digital divide. That widened more because of what was happening during online."

—Canadiens District Leader

As the world has grappled with the COVID-19 pandemic, educators and families have made extraordinary efforts toward teaching and supporting children. Educators have developed and implemented creative solutions to provide remote education and districts have drawn on available resources to hire mental health counselors, provide students with needed technology, and support teachers implementing remote learning. They have made these efforts against the backdrop of a health crisis that killed more than 600,000 Americans and more than 3.8 million people worldwide by the end of the 2020-21 school year, undermined economic stability, and isolated people from family and friends for more than a year.

COVID-19 undercut opportunities to learn everywhere, but also exacerbated existing inequalities in educational opportunities and outcomes. Early evidence suggests that students in communities and schools that were already underserved and identified as low performing before the pandemic were both more likely to be learning remotely and to be struggling academically during the pandemic (e.g., Dorn et al., 2020; Karpman et al., 2020). This is true across the country and in Michigan, where the COVID-19 pandemic posed an especially pronounced challenge in Partnership schools and districts (Hatch & Harbatkin, 2021). COVID-19 has taken a large toll on communities with high rates of poverty and underrepresented minorities—the same communities that are home to many of the low-performing schools that states have targeted for school and district turnaround. As job losses have mounted in these communities, families have reduced spending on food; estimates suggest that 17 million new Americans will become food insecure as a result of the pandemic (Leddy et al., 2020). Lower income households with food insecurity face increased risk of chronic disease development and complications and higher mortality (Berkowitz et al., 2020). Thus, these low-performing schools have encountered a particularly heavy lift in their efforts to educate students during the pandemic and ultimately to accelerate student learning once schools return to their new normal after the COVID-19 pandemic wanes.

Students and educators faced COVID-19-related challenges across all dimensions of their daily lives.

While the goal of this report is to describe the Partnership Model, its implementation, and its effects, there is no way to discuss the Partnership Model without discussing the outsized role of the pandemic in the 2019-20 and 2020-21 school years. Students and educators faced COVID-19-related challenges across all dimensions of their daily lives. The pandemic affected the health and socioeconomics of their families, friends, and communities, responsibilities at home, access to emotional and health-related supports, access to support networks, and schooling conditions. Importantly, the pandemic is not yet over; at the time of this writing, new variants and lower-than-hoped-for vaccination rates are threatening to create yet another wave of infections, hospitalizations, and death, which could extend the adverse contexts in which students live and learn.

In this section, we highlight some of the ways in which COVID-19 has already affected students and educators in Partnership districts and schools. We begin by describing the prevalence of COVID-19 in Partnership communities and its disproportionate effect using test positivity, case, and death data from MDHHS. We then hone in on the student experience by describing the ways Partnership district educators perceived that COVID-19 permeated the lives of students in their schools and classrooms.

After describing the role of COVID-19 in Partnership communities and the lives of students in particular, we turn to the ways schools and districts responded to the pandemic and the challenges educators faced in educating and supporting their students. We do so through a

summary of instructional modality in Partnership districts over the course of the 2020-21 school year followed by a discussion of instructional challenges from the educator perspective.

Finally, while standardized exams were not administered in spring 2020 and were not administered to all students in the spring of 2021, we are able to discuss teacher perceptions of their student learning at the beginning and end of the school year. These perceptions, while subjective in nature, can help to frame an understanding of student needs and policy decisions related to accelerating learning in the 2021-22 school year and beyond.

COVID-19 IN PARTNERSHIP COMMUNITIES

In this subsection, we begin by describing the prevalence of COVID-19 in Partnership communities over the course of the pandemic through the 2020-21 school year. We then describe how the pandemic has shaped the student experience in Partnership districts.

COVID-19 Struck Partnership Communities Harder Than Neighboring Communities

Partnership schools were charged with supporting their students against the backdrop of rising COVID-19 test positivity rates, case rates, and deaths in Partnership counties. Because we weight these analyses by student enrollment, these findings can be interpreted as the level of COVID-19 spread experienced by the average student in Partnership districts relative to the average student in non-Partnership districts.

Positivity rates were about 60% higher in Partnership communities than non-Partnership communities in the early days of the pandemic.

Test Positivity Rates in Partnership Communities Were Nearly Twice as High As Those in Non-Partnership Communities at the Beginning of the Pandemic

Figure 3.1 provides seven-day rolling average test positivity rates from March 15, 2020 through June 14, 2021 for Partnership communities (green solid line) and non-Partnership communities (blue dotted line). The possible values of test positivity range from 0–100 percent, where zero indicates that none of the administered tests came back positive and 100 signifies that all of the administered tests came back positive.

In examining Figure 3.1, two trends emerge. First, positivity rates were about 60% higher in Partnership communities than non-Partnership communities in the early days of the pandemic—with more than 45% of early tests yielding positive results compared with less than 30% in non-Partnership communities. Second, positivity rates remained higher in Partnership than non-Partnership communities through the 2019-20 school year before the rates converged in early fall 2020.

FIGURE 3.1. Test Positivity Rates Over Time by Partnership Status
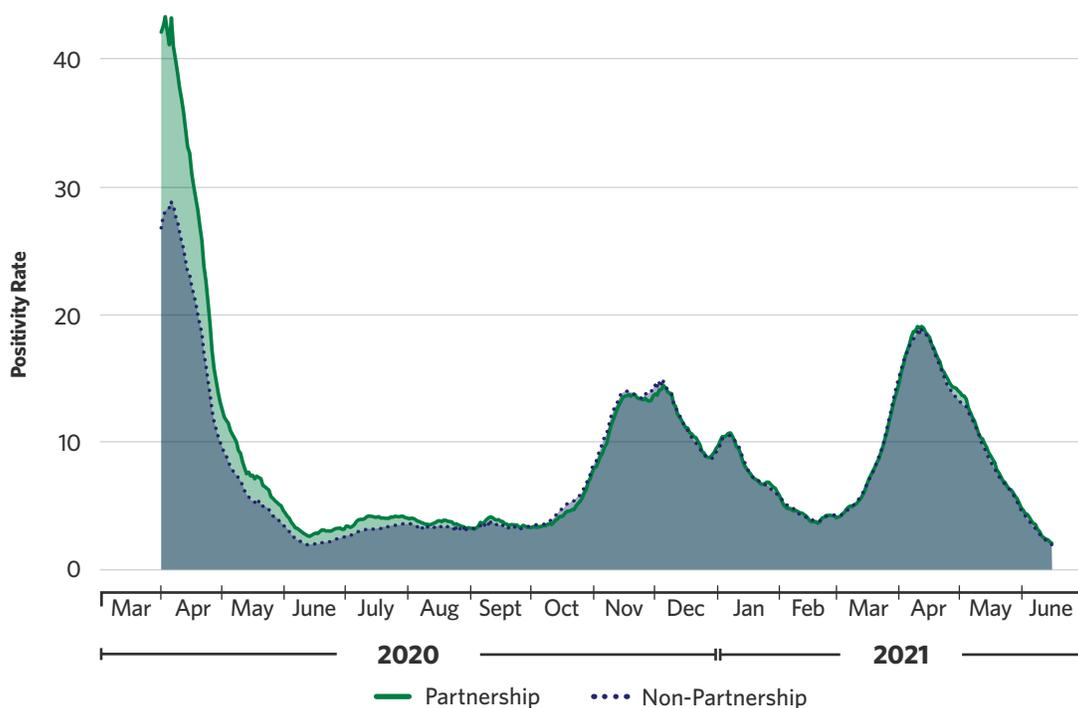
Note: Seven-day rolling averages of test positivity rates applied to school districts, weighted by student enrollment, from April 1, 2020 through June 14, 2021. In an earlier version of this report, we erroneously concluded that positivity rate remained higher in Partnership districts by the beginning of fall 2021. This is not the case, and has been corrected here.

Partnership Communities Experienced More Cases and Lost More Residents to COVID-19 than Other Communities

The early surge in Partnership communities is also evident in Figure 3.2, which shows seven-day rolling average case (first panel) and death (second panel) rates per 100,000 people over time in Partnership and non-Partnership communities. As the first wave of COVID-19 hit the United States in the spring of 2020, Partnership communities experienced twice as many cases and deaths per 100,000 residents as non-Partnership communities. Specifically, Partnership communities experienced more than 20 cases per 100,000 residents in early April 2020 while non-Partnership communities experienced about 10. At the spring 2020 peak, Partnership communities lost nearly 3 per 100,000 residents due to COVID-19-related causes each day—twice as many as non-Partnership communities. Partnership and non-Partnership communities largely equalized over time as new public safety measures took effect, resulting in similar case rates by summer 2020 and through the 2020-21 school year. After non-Partnership communities experienced slightly more cases and deaths in the second wave (winter 2020), the third wave (spring 2021) again disproportionately struck Partnership communities.

FIGURE 3.2. Case and Death Rates Over Time per 100,00 Population by Partnership Status
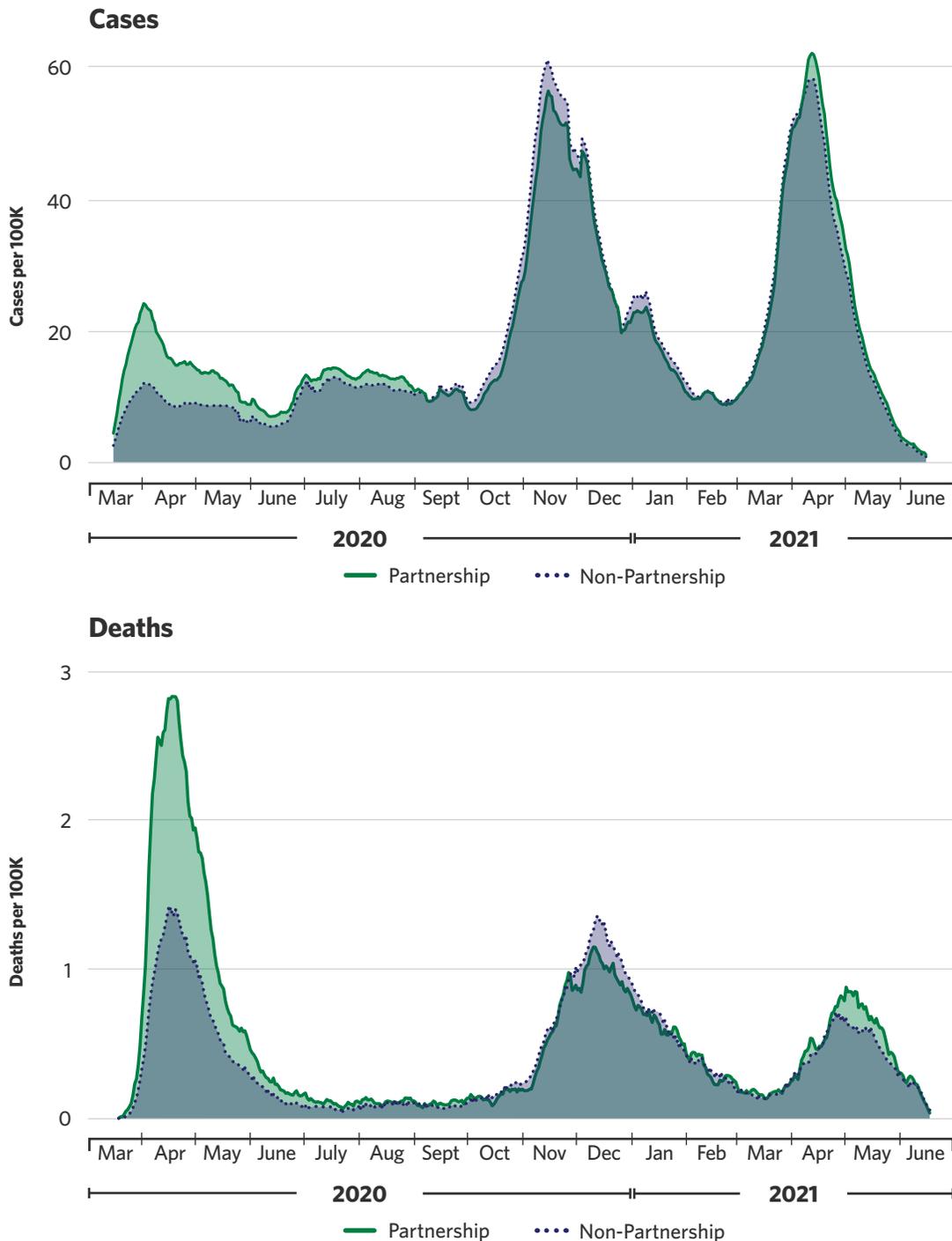
Cases

Deaths

Note: 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.

Over the course of the pandemic through the 2020-21 school year, Partnership communities experienced more total cases and more total deaths per 100,000 residents than other communities. Table 3.1 provides these totals as of June 14, 2021. Specifically, Partnership

communities had experienced more than 9,000 cases per 100,000 population—nearly 5% higher than the approximately 8,600 in non-Partnership communities. The discrepancy in deaths was more severe, with 244 people per 100,000 residents of Partnership communities dying, 28% more than the 191 in non-Partnership communities. As a result, students in Partnership districts are substantially more likely to have lost a friend or family member to COVID-19 at some point during the pandemic than students in non-Partnership districts—and as we show later, educators reported that many of their students have lost family members to COVID-19.

Dividing the death rate by the case rate points to additional inequalities—a higher death-to-case rate may stem from a number of factors, including health disparities (e.g., health insurance, access to high quality health care), economic conditions (e.g., ability to take off work), and others. Specifically, the death-to-case rate is 2.7% in Partnership and 2.2% in non-Partnership communities.

TABLE 3.1. Cumulative Case and Death Rates per 100,000 by Partnership Status		
	Partnership	**All Others**
Cumulative cases per 100K	9,049.32	8,629.64
Cumulative deaths per 100K	244.31	190.71
Death-to-case rate	2.7%	2.2%

Note: County-level case and death rates per 100,000 residents applied to districts and weighted by district size. Totals as of June 14, 2021.

Looking across positivity, case, and death rates, it is clear that the COVID-19 pandemic struck especially hard in Partnership communities. These community challenges permeated the experiences of Partnership district educators and students, who were working to teach and learn as the pandemic struck their communities. Partnership leaders described the disproportionate effect of COVID-19 on their communities in particular, citing "two pandemics" related to intersecting issues of racism and poverty. The district leader of Blues said:

> *I think probably one of the most challenging issues we're facing, both I would say the two pandemics, right? We have COVID trying to just work through all of that and what does that look like, but then layer that on top of the racism pandemic and the fact that [our community is] disproportionately impacted by COVID.*

This idea was echoed by others, such as the district leader of Canadiens, who explained:

> *It's really more about just trying to keep families and students engaged in the educational process because of the challenges of poverty and the disproportionate impact that any kind of crisis happens in the Black community and low-income communities.*

The rates of test positivity, cases, and deaths are high-level average measures that COVID-19 students in Partnership districts experienced, but these averages may hide the fact that students in Partnership districts or schools may have been exposed to higher or lower cases and deaths than their county average. Given the variation in socioeconomic status across counties and the fact that Partnership schools are home to a disproportionate share of the state's economically

disadvantaged students, it is likely that the COVID-19 effect for Partnership district and school students was even more pronounced than these figures suggest. While we do not have test positivity, case, and death data for families in Partnership schools in particular, we can draw from educator survey data to unpack the ways students in these districts experienced the pandemic. We can also use these data to explore ways the pandemic's effect resonated beyond cases and deaths. In the next subsection, we draw on these survey data to describe teacher perceptions of their students' experiences during the pandemic in the 2020-21 school year.

Teachers Believed that Students in Partnership Schools Experienced Significant Out-of-School Challenges Related to COVID-19

As their communities contended with illness, death, and other losses related to the pandemic, students in Partnership schools were charged with attending school, completing assignments, and continuing to learn. Students, along with their parents, teachers, and school and district leaders, made remarkable efforts toward continuing their education even as they experienced unparalleled obstacles outside of the school building. In this subsection, we draw from teacher survey data to understand teacher perceptions of the ways in which COVID-19 affected students' well-being outside of school.

FIGURE 3.3. Out-of-School Challenges Construct

Illness

TEACHER ESTIMATES OF PROPORTION OF STUDENTS WHO EXPERIENCED:

Immediate or extended family members contracted COVID-19, student contracted COVID-19, student has continued symptoms of COVID-19, disrupted learning due to COVID-19 health issues, socioemotional trauma due to COVID-19.

Health Care & Housing

TEACHER PERCEPTIONS OF STUDENT CHALLENGES:

Access to healthcare, mental health, access to mental health care, food insecurity, homelessness.

Economics & Attendance

TEACHER PERCEPTIONS OF STUDENT CHALLENGES:

Lost socialization opportunities, parent/guardian job loss, parent as frontline worker, new child care responsibilities, inability to attend school consistently.

We developed three constructs to characterize teacher perceptions of the intensity of out-of-school challenges students experienced during the pandemic. These constructs represent teacher-perceived obstacles related to illness, health care and housing, and economic and attendance challenges, respectively, as shown in Figure 3.3. We underscore that these measures represent teacher perceptions of their students' challenges and should therefore be interpreted with caution, as teachers do not have complete information about their students. However, these findings help to illuminate some ways the pandemic may have introduced or intensified out-of-school challenges for students in Partnership schools and districts. While these challenges unfolded outside of the purview of Partnership districts and schools, their effect has permeated students' educational experiences. The effect of out-of-school challenges was even more salient during the COVID-19 pandemic as schooling occurred largely in students' homes rather than the school itself. One teacher used the survey open response to describe how these challenges undermine student learning:

> *Teaching in school districts such as [District] has made me understand that even though the students have great potential, the economic and emotional situations play a big role in the focus and learning of each individual student. We deal more with external factors out of the classroom environment—deaths, house fire, handicap parents, kids whose priority is to work and not to learn because the income is necessary—than with discipline issues or willingness to learn. [It] is sad to see the lack of opportunity that some brilliant minds lack.*

In the remainder of this subsection, we begin by summarizing responses to individual question items related to illness, health care and housing, and economics and attendance. Because COVID-19 affected entire communities and we have survey data from both Partnership and non-Partnership schools in Partnership districts, we first focus on responses from all educators in Partnership districts. We then use the aggregated constructs to show the extent to which students in Cohort 1 schools faced even greater challenges than their peers in Cohort 2. We do not find that there were meaningful differences between Partnership and non-Partnership schools in Partnership districts or between traditional public and charter schools.

Teachers Perceived That Illness Was Prevalent in Students' Families, and Students Coped with Socioemotional Trauma Related to the Pandemic

In this year's survey, we asked teachers to estimate the share of their students who experienced health challenges due to COVID-19. Figure 3.4 shows the estimated share of students in Partnership districts experiencing these challenges (top panel) and the implications of illness for student mental health and learning (bottom panel). It is clear that high rates of community spread affected students in Partnership schools and districts. Specifically, the top panel shows that teachers estimated that 28–48% of students had extended family members and 22–39% had immediate family members contract the virus. Teachers estimated that fewer students contracted COVID-19 themselves (8–20%), which aligns with evidence showing that children may be less likely to become infected, be symptomatic, and seed outbreaks than adults—especially during the 2020-21 school year, before the Delta variant was dominant in the United States. (Goldstein et al., 2020; Lee et al., 2020; Ludvigsson, 2020). However, the final bar in the panel shows that teachers reported that 6–18% of their students who became infected with COVID-19 suffered continued symptoms, underscoring that the virus can still create health challenges for some children who do contract it.

FIGURE 3.4. Estimated Share of Students in Partnership Districts Experiencing Health Challenges Related to COVID-19

Teachers' Perceptions of Students' Family and Personal Illness

Category	Range
Immediate Family Members Contracted COVID-19	22.4 – 39.2
Other (Non-Immediate) Family Members Contracted COVID-19	28.4 – 45.7
Students Contracted COVID-19	8.0 – 20.2
Students Have Suffered from Continued Symptoms of COVID-19	6.2 – 17.5

Teachers' Estimates of the Percent of Students Experiencing Challenges

Teachers' Perceptions of Implications of Illness

Category	Range
Socioemotional Trauma as a Result of COVID-19	46.5 – 62.5
Learning Loss Due to Health Issues Related to COVID-19	24.2 – 37.9

Estimated Percent of Students Experiencing Challenge

Note: Bars provide teacher-estimated range of students experiencing each health-related challenge based on responses to the question, "In this school year, approximately what proportion of your students have experienced each of the following as a result of COVID-19?" Response options were <10%, 10-25%, 26-50%, 51-75%, 76-90%, and >90%. This question was asked to teachers only. To create estimated ranges, we assign the minimum value of the selected response option as the lower bound and the maximum value as the upper bound. We then take the weighted mean of the lower and upper bounds, respectively. The figure to the left of each bar represents the estimated mean lower bound and the figure to the right of each bar represents the estimated mean upper bound. The first bar can therefore be interpreted as: teachers in Partnership districts estimated that 22.4–39.2% of students had an immediate family member contract COVID-19.

The lower panel of Figure 3.4 illustrates teachers' perceptions of some of the socioemotional and educational implications of these factors. Perhaps unsurprisingly given the widespread infection rates combined with social isolation resulting in part from remote instruction, the first bar shows that student socioemotional trauma was widespread, with teachers estimating that 47–63% of their students experienced socioemotional trauma. One teacher highlighted the emotional effect the pandemic had on students, *"This pandemic has truly rocked my students, especially my seniors and their educational experience. They, like their and us teachers are socially and emotionally overwhelmed."*

While we describe the in-school instructional challenges stemming from the pandemic later in this section, the last bar highlights the extent to which teachers believed that the health effects

of COVID-19 affected student learning. Specifically, teachers estimated that 24–38% of students suffered disrupted learning loss due to health issues from COVID-19.

Teachers Believed Access to Health Care and Housing Were a Major Challenges for Their Students

Before the onset of COVID-19, Partnership communities had higher rates of poverty and homelessness and less access to health care than other communities in the state (Hatch & Harbatkin, 2021). These challenges became more pronounced during the pandemic, which prompted lost employment opportunities, overwhelmed health systems, and created more need for mental health services.

Figure 3.5 shows the percent of teachers reporting perceptions that selected health care and housing factors were a major or the greatest challenge for their students this year. Teachers considered student mental health as the most salient challenge, with 64% reporting that they believed that student mental health was a major or the greatest challenge, and 58% reporting that they believed that access to mental health care was at least a major challenge during the 2020-21 school year. More than half of teachers in Partnership districts believed that food insecurity was a substantial difficulty, while approximately 40% believed that housing instability and access to health care were sizable hurdles.

FIGURE 3.5. Percent of Teachers Reporting Perceptions That Selected Health Care and Housing Challenges Were a Major Challenge or Above for Their Students This Year
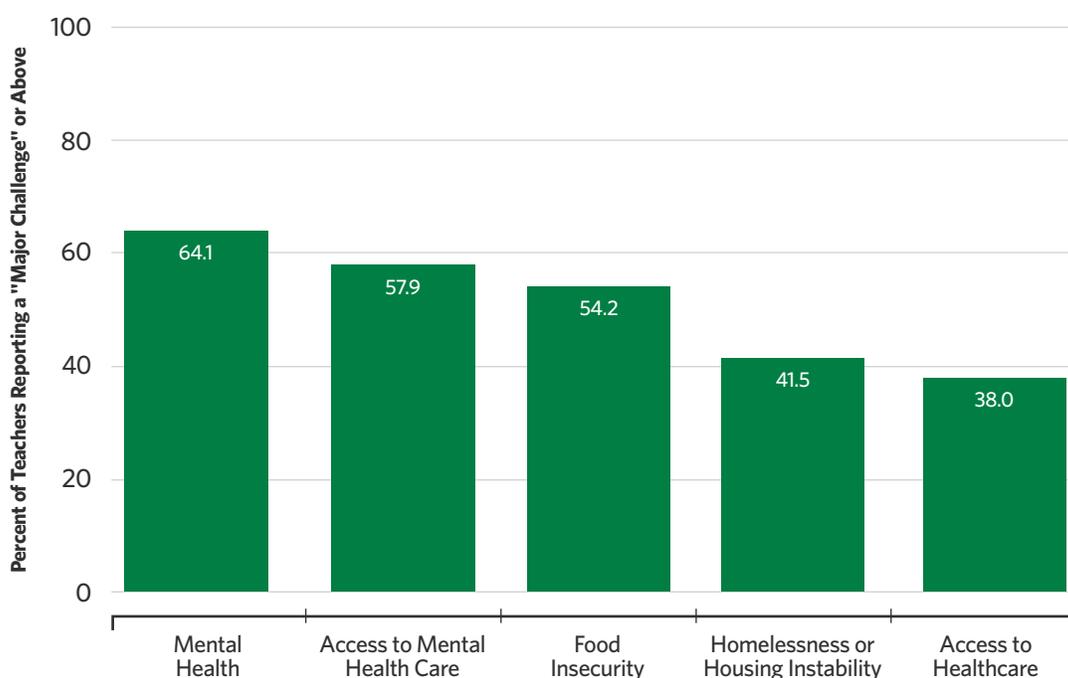
Note: Teachers were asked, "To what extent have each of the following been a challenge for your students this school year?" Response options were "not a challenge," "a minimal challenge," "a moderate challenge," "a major challenge," and "the greatest challenge." Bar heights provide the percent of teachers across Partnership districts who reported that they believed that each item was either a major challenge or the greatest challenge. This question was asked to teachers only.

Teachers Believed That Community Economic Challenges May Have Undermined Student Opportunity to Learn

The COVID-19 pandemic-induced recession may have disproportionately affected communities like those in which Partnership districts are located, that already had lower median income and higher rates of poverty. Economic challenges may have also contributed to lost opportunities to learn as students took on new child care responsibilities or jobs to contribute to their families' needs. The district leader of the Capitals described how these challenges relate:

> For lower socioeconomic groups, they depend on kids for child care and support. We've seen that through COVID, that we have middle and high school kids, and in some cases we found elementary kids, that are caretakers for their siblings or their cousins and siblings and anybody else, throughout the day, 'cause mom, dad, mom and dad, whoever is the adult, they're trying to work, and the kids are at home.

One teacher described a student joining class *"while feeding an 8-month-old in his crossed legs to hold the bottle."* Another wrote:

> [F]or many of our students, making it through the day is all they can do. My high school students have shouldered enormous burdens this year. They are breadwinners, babysitters, tutors, cooks, and whatever else is needed in the household.

Another noted the challenges students face attending virtual class:

> Many times my students are home alone for long stretches due to the parent working long hours or are responsible for babysitting siblings or have chores to do. We do the best we can under the circumstances and I try to provide emotional support and encouragement on a daily basis.

These findings suggest that as students took on new responsibilities related to economic challenges, they lost opportunities to learn and to engage with their peers. Figure 3.6 summarizes teacher perceptions of student challenges related to economic and attendance factors. Teachers reported that the most pronounced challenges were lost socialization opportunities with peers and inability to attend school consistently, with 8 in 10 teachers reporting these as major challenges or above. Approximately 7 in 10 teachers believed parent or guardian job loss and students taking on new child care responsibilities were major challenges or above, while 6 in 10 believed parents' jobs as frontline workers were serious challenges for their students.

We also asked teachers about challenges related to students having jobs as frontline workers during the COVID-19 pandemic. While we do not provide this number in the figure because it is only relevant for students of working age, 62% of high school teachers reported that having a job as a frontline worker was a major challenge or above for their students.

FIGURE 3.6. Percent of Teachers Reporting Perceptions That Selected Economic and Attendance Challenges Were a Major Challenge or Above for Their Students This Year
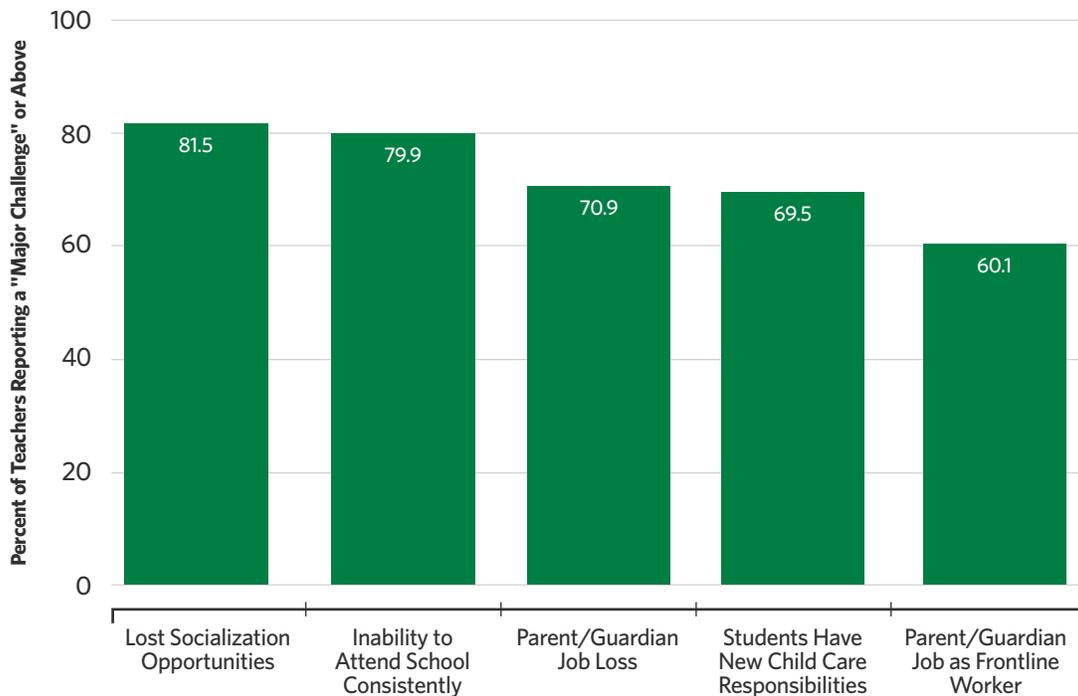
Note: Teachers were asked, "To what extent have each of the following been a challenge for your students this school year?" Response options were "not a challenge," "a minimal challenge," "a moderate challenge," "a major challenge," and "the greatest challenge." Bar heights provide the percent of teachers across Partnership districts who reported that they believed that each item was either a major challenge or the greatest challenge. This question was asked to teachers only.

HOW TO INTERPRET FIGURES ILLUSTRATING CONSTRUCT DIFFERENCES

Throughout this report, we provide figures representing differences across groups and over time on the constructs described in Section Two. We create the constructs using factor analysis and then generate factor scores for each teacher and principal respondent. These factor scores are z-scores with a mean of 0 and a standard deviation of 1 across the full sample of educators responding to the question items. For ease of interpretation, we transform each teacher or principal's factor score based on the normal distribution and assign them a percentile representing their response on the normal curve. For example, the average respondent would have a factor score of 0, which we would convert to a 50, representing the 50th

percentile on the normal distribution. We then take the mean of the percentile variable for a given group of educators to denote the group average on a particular construct.

Because the constructs have a mean of 50 across all respondents, a value above 50 suggests that a given group is higher than the average respondent, while a value below 50 suggests that a given group is lower than the average respondent.

The valence of these values depends on the construct they represent. For example, the construct in Figure 3.7 represents educators' perceptions of the intensity of out-of-school challenges students grappled with during the pandemic. Groups with higher average values experienced more salient challenges, while groups with lower average values experienced less salient challenges. To facilitate interpretation of these graphics, we include arrows that clarify how to understand higher or lower values.

In Figure 3.7, the green bars denote the average construct values for Cohort 1 and the dark blue bars denote the average construct values for Cohort 2. The first two bars show that Cohort 1 teachers believed their students had greater challenges related to illness than Cohort 2 teachers did. Because the green bar is higher than the 50th percentile line, we can say that Cohort 1 teachers, on average, reported greater illness-related challenges than the average respondent on these question items. Because the dark blue bar is below the 50th percentile line, Cohort 2 teachers, on average, reported less salient illness-related challenges than the average respondent. Because the green bar is taller than the dark blue bar, we can say that Cohort 1 teachers reported greater illness-related challenges than Cohort 2 teachers did. While the graphic does not include significance stars, we only show differences that t-tests show are statistically significant at least p<0.10 for teachers.

In this case, the average respondent is the average teacher in the 2020-21 school year because these questions were asked only to teachers in 2020-21. In other cases, the average represents all teachers and principals in 2020-21, all teachers and principals across all three survey waves, or all principals. We describe the relative sample in each graphic note.

Students in Cohort 1 Schools Experienced More Pronounced Challenges

Figure 3.7 shows each out-of-school challenge by cohort. The taller bars for Cohort 1 on each of the three constructs indicate that teachers in Cohort 1 schools perceived that their students experienced greater difficulties than did teachers in Cohort 2 schools. These differences may reflect the cohort differences described in Section One, which shows that students in Cohort 1 schools are more likely to be Black and to be economically disadvantaged.

FIGURE 3.7. Teacher Perceptions of Student Out-of-School Challenges
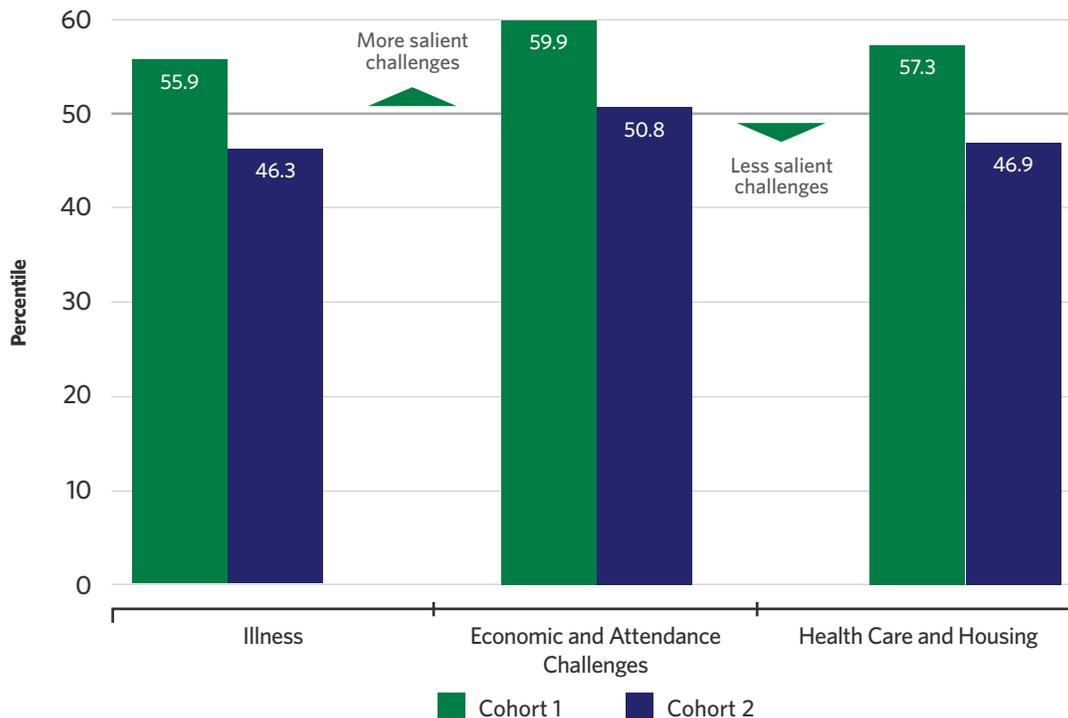
Note: Bars show the percentile for teacher perceptions of each out-of-school challenge by cohort. The first two bars represent the illness construct, the second two denote economic and attendance challenges construct, and the third two denote the health care and housing construct. The 50th percentile represents the average teacher respondent on the 2020-21 survey. A mean response above the 50th percentile line indicates that a given group reported greater challenges than the average respondent, while a mean response below the 50th percentile line indicates that a given group reported lesser challenges than the average respondent.

COVID-19 IN PARTNERSHIP DISTRICTS AND SCHOOLS

In this subsection, we draw from district instructional plans to illustrate how Partnership districts delivered instruction over the course of the 2020-21 school year and how they differed from other districts in the state. We then use teacher and principal survey data to illuminate some of the instructional challenges that educators grappled with to educate and support students during the pandemic.

Partnership Districts Relied Heavily on Remote Instruction Throughout the 2020-21 School Year

High community spread, death rates, and other community-based factors have led Partnership districts to rely largely on remote instruction for a large part of the school year. Indeed, Figure 3.8 shows that more than half of Partnership districts began the school year fully remote, compared with about 20% of all other districts. Although districts across the state—both Partnership

and non-Partnership—shifted to remote-only instruction in December in accordance with state guidance, Partnership districts continued to report plans for remote-only instruction for January 2021 while the number of non-Partnership districts in remote-only mode decreased for the new year. In January 2021, nearly all Partnership districts were fully remote, compared with approximately one-third of non-Partnership districts. Partnership districts began to return to in-person and hybrid instruction later in the 2020-21 school year than other districts in the state, and many never returned to fully in-person instruction.

FIGURE 3.8. District Instructional Modality Plans by Month and Partnership Status
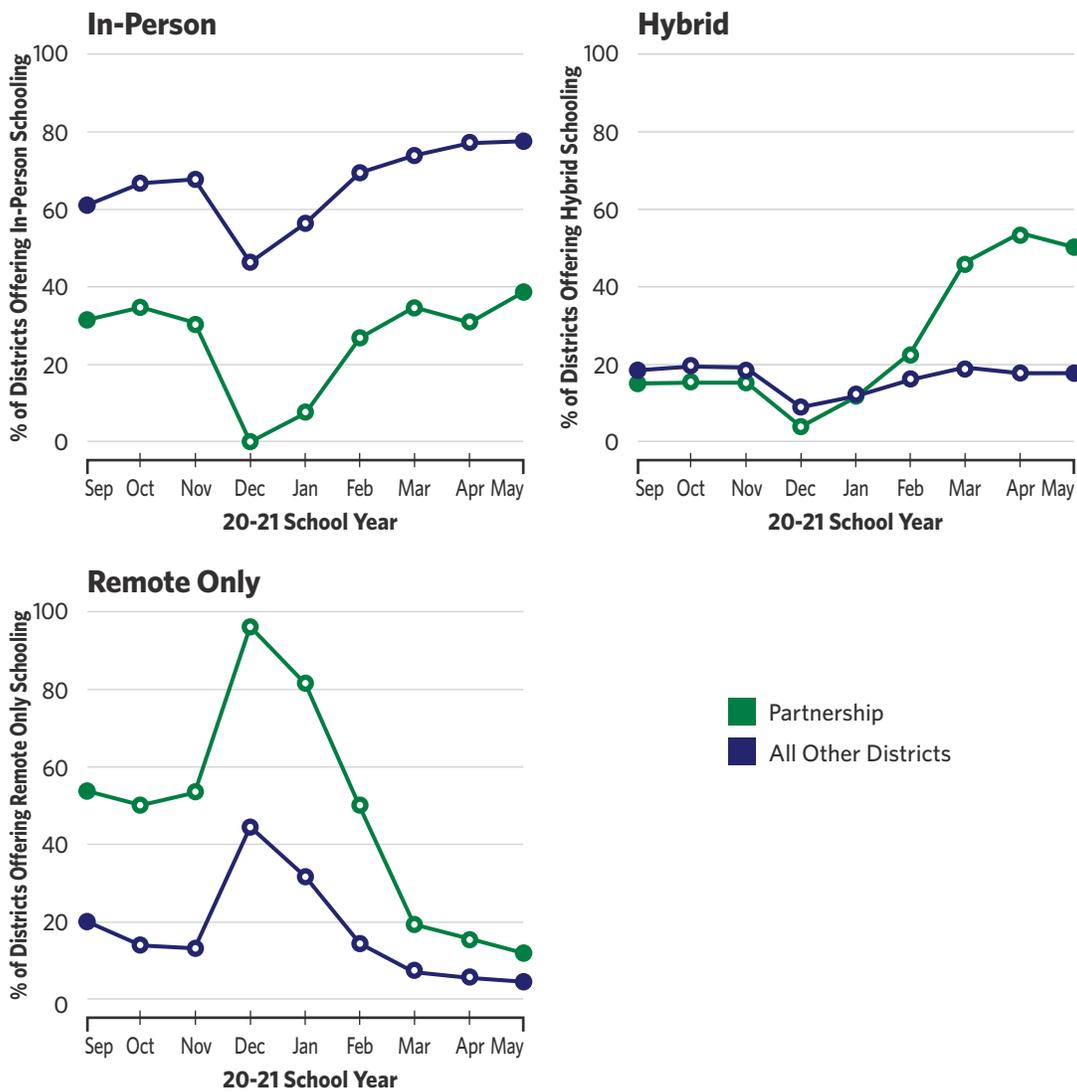
Note: Marker heights represent the share of Partnership districts that reported plans to operate in a given modality in each month. Fully in-person option means districts have an option for students to attend in-person for all days. Hybrid classifies districts without a fully in-person option that have 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.

These differences may in fact reflect the preferences of Partnership families, as two national polls suggest most children were receiving their parents' preferred mode of instruction (Barnum, 2021). Preferences in Partnership districts may be shaped in part by the underlying disparities of their communities. For instance, concerns about contracting COVID-19 may be greater in families with higher risk factors, such as preexisting conditions, inadequate access to care, distrust of the medical system, and lack of paid time off. Indeed, one teacher shared a perception that parents were choosing to keep their students in remote learning due to health fears, *"Many parents are very afraid to send their children back to school, despite excellent communication and mitigation strategies in place on our campus and in our district."*

Figure 3.9 sheds some light on those preferences. While Figure 3.8 shows the number of districts offering each modality, Figure 3.9 provides the estimated number of *students* who actually enrolled in each instructional modality. The ranges represent the total student shares based on the low (labeled "min uptake") and high (labeled "max uptake") ends of the percentage ranges indicated by each district. The height of the light gray bars represents the total percentage of students whose district offered that modality.

Inequitable provision of in-person instructional options for students in Partnership districts and the differential take-up rate of in-person schooling throughout the 2020-21 school year could have severe implications for students' opportunities to learn.

The difference between the green and blue bars relative to the grey bars shows that across all months, families in Partnership districts were more likely to take up remote instruction and less likely to take up in-person instruction even to the extent that it was offered.[1] However, the upward trend in the top panel combined with the downward trend in the bottom panel shows a shift from fully remote to in-person instruction toward the end of the 2020-21 school year.

These patterns suggest that both the inequitable provision of in-person instructional options for students in Partnership relative to all other districts in the state districts and the differential take-up rate of in-person schooling throughout the 2020-21 school year could have severe implications for Partnership district students' opportunities to learn.

FIGURE 3.9. Estimated Uptake of Instructional Modality by Month and Partnership Status
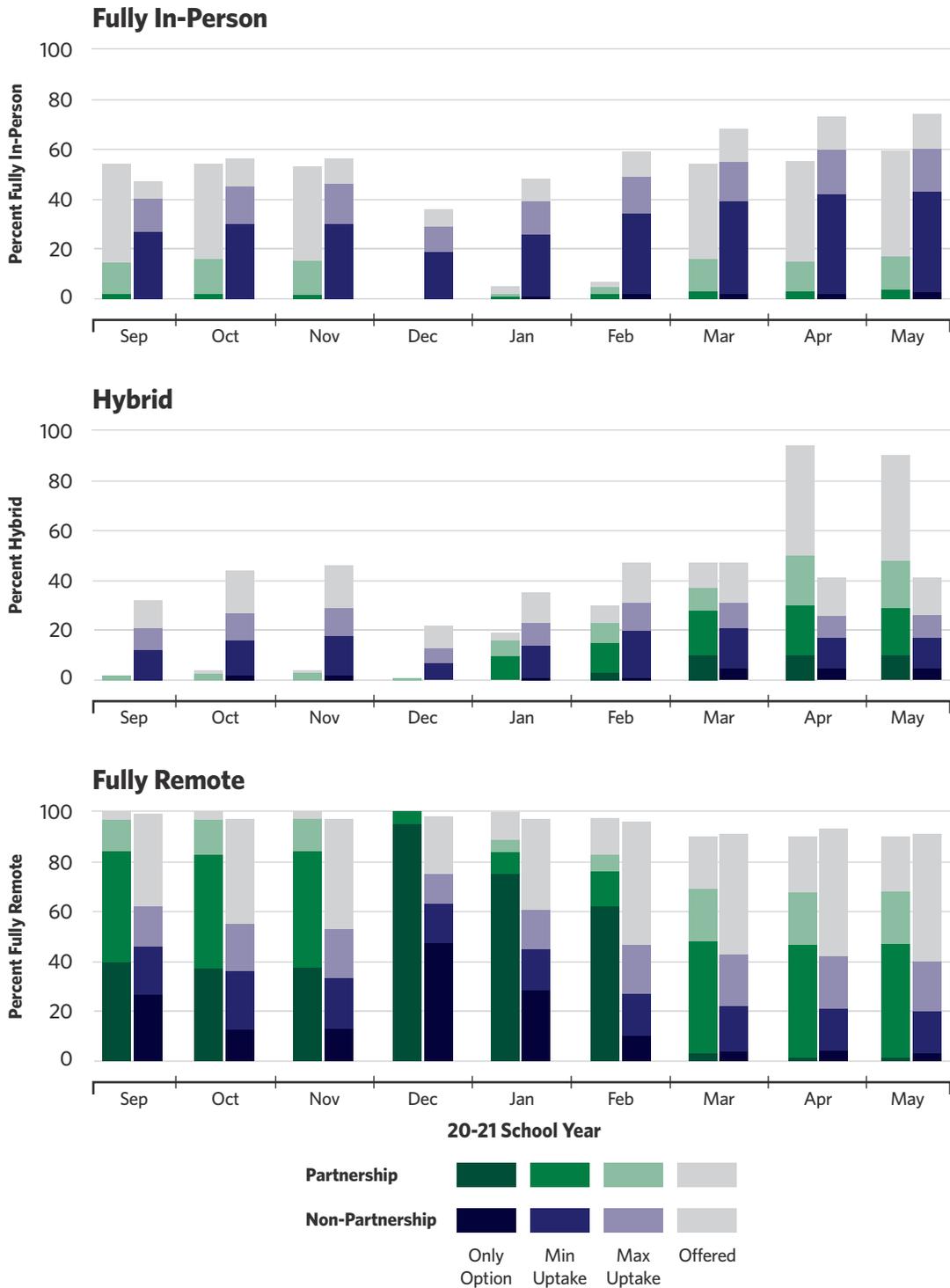
Note: Green and blue shaded ranges represent the estimated percent of students who received instruction in each of the three modalities in Partnership and non-Partnership districts, respectively. Figures exclude virtual districts that were remote prior to the pandemic.

While some students may benefit from remote instruction, emerging research from other states suggests that on average, students learned less during the COVID-19 pandemic when engaged in remote relative to in-person instruction (e.g., Kogan & Lavertu, 2021). Educators leveraged available resources to do their best in remote conditions, but district leaders shared that challenges related to remote learning remained. For example, the Hurricanes charter leader said:

> First of all, I'd rather have all the students in the building. I think with the population we serve, I can't speak for everybody else, but I think for the population we serve here that they do better when they're in the building. The whole relational or relationship piece is very important. We struggle and we continue to struggle with the virtual model.

The Sabres district leader also described their perceptions of challenges related to educating students remotely:

> I personally think virtual is effective for no more than 10%, and that's purely based on data. That's based on attendance data for virtual. That's based on assignment completion and successful assignment completion that we can confidently say has been completed by the student and not their parent.

As a result of the opportunity gaps related to remote instruction, it is likely that students in Partnership districts will enter the 2021-22 school year having had less opportunity to learn than their peers in non-Partnership districts, and will need more intensive supports to accelerate their learning in the years to come.

New Teaching and Learning Challenges Emerged in Partnership Districts Due to the Pandemic

Given the community context, reliance on remote instruction, and shifts between instructional modes, educators in Partnership schools and districts navigated a unique set of challenges relative to past years. In this subsection, we describe the ways in which educators perceived these challenges to have affected instruction in their schools. To do so, we draw from questions on the 2020-21 survey asking teachers about availability of resources during COVID-19 and classroom instructional challenges.

Teachers Perceived That Students in Partnership Districts Lacked In-Home Resources to Support Their Learning

The socioeconomic challenges in Partnership communities may translate into resource gaps both within and outside of the school for several reasons. First, delivering high quality remote instruction requires access to reliable internet and other needed resources that are less widely available in Partnership communities. In addition, students may not have sufficient resources at home to support their learning, while schools may not have adequate funding to provide all of those resources. Resource challenges may have been especially salient during remote learning because students were attending class from home rather than in a school building with reliable internet access, computers, desks, and necessary curricular materials.

Figure 3.10 provides the share of teachers in Partnership districts who agreed or strongly agreed that their students had various learning resources at home. All bars are below 50%, indicating that less than half of teachers agreed that students had any of the listed resources. Of each of the options, teachers were most likely to report that their students had the technology resources (e.g., computers, software) needed to learn (with 44% agreeing or strongly agreeing). Still, the majority of teachers did not agree or strongly agree that their students had adequate technology resources, and the fourth bar shows that even fewer (22%) believed their students had reliable internet access. These responses came despite great efforts by district leaders to distribute devices and help families obtain internet access (Hatch & Harbatkin, 2021).

Just over one-third of teachers agreed that students had non-technological resources (e.g., paper, pencils, subject-specific tools such as lab materials, and musical instruments), 31% agreed that students had access to all meals daily (again, despite Partnership districts' attempts to provide meals), 14% agreed that students had parents or guardians to assist with schoolwork as needed, and only 9% of teachers agreed that their students had a quiet, well-appointed place to learn. It is important to note that our data cannot speak to the reason for resource constraints. It is possible that districts and schools made certain resources available but families lacked transportation to retrieve the resources from a central location, or that districts and schools did not have the capacity to provide the necessary level of resources at scale.

FIGURE 3.10. Teacher Perceptions of Students' Available Learning Resources in Partnership Districts
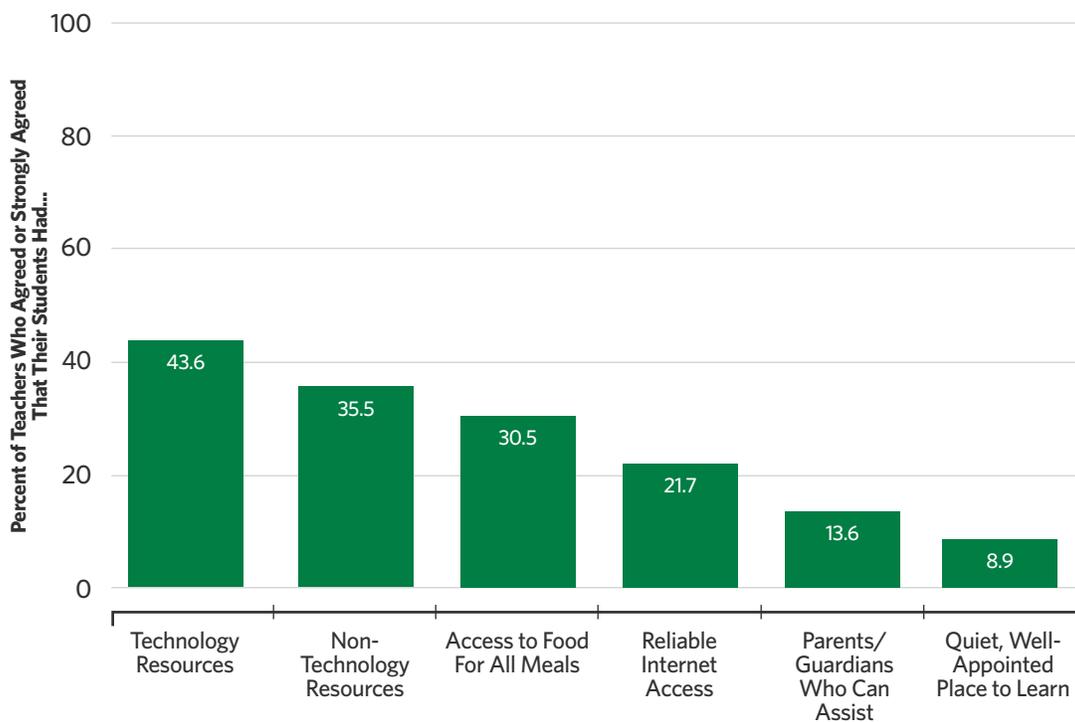
Note: Teachers were asked "To what extent do you agree with each of the following statements?" regarding their students' access to resources related to schooling during the pandemic. Response options were "strongly disagree," "agree," "neither agree nor disagree," "agree," or "strongly agree." Bar heights represent the percent of teachers across Partnership districts who agreed or strongly agreed with each statement (abbreviated in the figure). Question asked to teachers only. Full response text is provided in the online appendix.

Two of these items—technology resources and reliable internet access—illustrate the digital divide in districts with higher rates of underrepresented minorities and students in poverty. In particular, research shows that students in poverty as well as Black, Hispanic, and Native American students are less likely to have access to high-speed internet and a computing device than more affluent and White students (Darling-Hammond et al., 2020; National Center for Education Statistics, 2018). For this reason, districts across the country like those in Partnership are more likely to be classified as "internet deserts," challenged by issues of digital access, than more affluent districts.

While Partnership districts made efforts to address these gaps by providing students with computing devices and internet, Partnership leaders frequently cited technology concerns as a significant challenge related to the pandemic. For instance, the district leader of Devils explained that *"the biggest thing is connectivity and technology-challenged people."* Like other Partnership leaders, Devils' superintendent explained how complex it was to address the digital divide in the district:

> *We had been identified in [county] as one of those Internet deserts. We have put a lot of money and time into figuring out how to navigate this. We bought over 100 Verizon Wi-Fi devices for our families. We've done some professional development for families and students on how to use those and how to use the Chromebooks. …You run into families who don't know how to use computers.*

Although Partnership leaders by and large were able to supply devices, concerns lingered about whether families and students could use them effectively. The charter leader of Lightning noted two particular difficulties in this vein. First, they discussed that it was a challenge to fix large numbers of broken devices. Second, families sometimes had to share devices amongst children in the house. They added, *"Some of our families had to share Chromebooks, like if you had two or three kids, and that was not ideal."*

Teachers also shared that technology gaps undermined learning even after the school provided students with computers and Wi-Fi hotspots. For example, one teacher wrote:

> *Even with these provisions our students have had a hard time logging on and being a part of a virtual classroom during shutdowns. Quite a few computers have been returned to us broken and we ran out of extras to pass out so some families are having to make due with semi-broken but still functional computers.*

The relatively higher share of teachers reporting that students had the technology resources they need to learn, combined with responses from Partnership educators, suggests that providing students with devices may have narrowed the digital divide but did not fully address student needs.

Meanwhile, survey responses from teachers elucidate the finding that students in Partnership districts did not have a quiet, well-appointed place to learn. One teacher wrote:

> *Remote learning was extremely difficult as the households were so loud and chaotic. There were children running around screaming, dogs barking, and televisions blasting. All this took the attention away from the lessons. At times, it was the opposite, with the parent sitting out of view of the camera whispering all of the answers to the student. Either way, my students were not learning a thing.*

One teacher summarized perceptions of the challenges related to learning at home for students in Partnership districts:

> These kids need more food. They need warmer clothes. If we're going to give them tablets which was awesome, they need to work consistently. These kids are parenting younger siblings and in noisy homes with no space to learn, and then they're expected to just make things work normally. Nothing is normal. Everyone is traumatized and scared.

Another teacher wrote:

> It has been challenging to see families doing everything within their power to support their kids with remote learning, but it still just not be enough when compared to in-person school. The home environments have Internet but it often lags, they have lots of kids and small homes so there are little siblings running around yelling or tv on in the room where the kindergartner is trying to learn. The parents are trying SO hard and I can't ask for anything more than their best which I believe they are giving. It has just been so challenging when I can't control much of the learning environment. That said, my students are darn close to where they would have been academically if they had been in my classroom in person. They have worked so hard! We will return to school for the first time this year in hybrid on 3/1 and I am so very thrilled to have them coming in person!

Resource Challenges Were More Salient for TPS Teachers

We examine differences in teaching and learning challenges between TPS and charter schools using two constructs, shown in Figure 3.11.[2]

FIGURE 3.11. Teaching and Learning Challenges Constructs

Student Learning Resources

AGREE WITH STATEMENTS:

Students have reliable internet, students have technology resources, students have non-technology resources, students have parents who can help, students have place to learn, students have daily access to meals.

Instructional Resources

AGREE WITH STATEMENTS:

I am able to educate students as well as prior years, I have data and information to target instruction, I have resources to serve students.

Figure 3.12 highlights differences between TPS and charter teachers' perceptions of student learning resources and instructional resources. We find that teachers in charter schools reported perceptions that their students had more access to resources at home and educators had better access to instructional resources.

FIGURE 3.12. Differences in Learning Resources by School Type
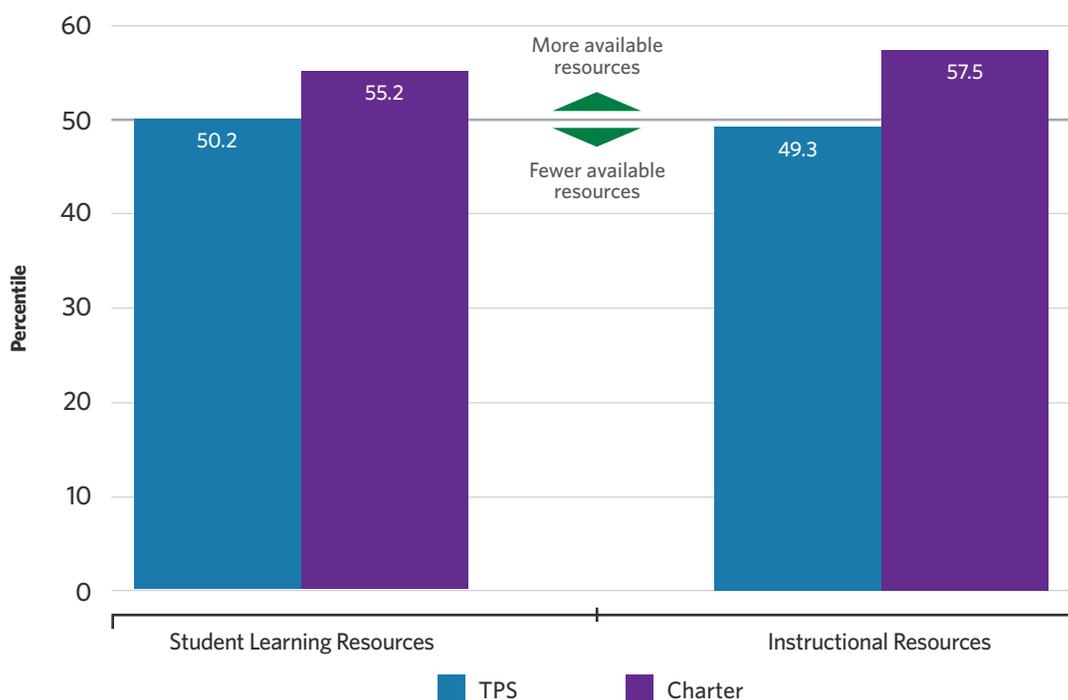
Note: Bar heights represent mean percentiles on TPS and charter school teacher responses to student learning resources and instructional resources construct items. The 50th percentile represents the average for all teachers on the 2020-21 survey. A mean response above the 50th percentile line indicates that a given group reported higher availability of resources than the average respondent, while a mean response below the 50th percentile line indicates that a given group reported lower availability of resources than the average respondent.

Teachers Faced Instructional Challenges but Also Highlighted Some Unexpected Opportunities Related to Remote Learning

While the challenges highlighted above involve resource deficits for both students and teachers, another set of challenges emerged during the COVID-19 pandemic related to day-to-day instructional activities. These challenges include factors such as classroom management (both online and in person), access to supplementary curricular materials, maintaining instructional continuity for students across remote and in-person learning, educating students with disabilities, and communicating with families. Figure 3.13 provides the share of teachers in Partnership districts who reported that each item was a moderate, major, or the greatest challenge in their classroom.[3] The most-cited challenges were communicating with families, providing instruction to students with disabilities, maintaining instructional continuity across modalities, and access to supplementary curricular materials, with approximately 6 in 10 citing each as a moderate challenge or above.

Classroom management was a challenge for fewer teachers, though 44% still cited online classroom management and 22% cited in-person classroom management as a challenge. As we describe later in Section Eight, typical stressors related to classroom and behavior management may have been less salient during remote instruction. One teacher wrote, "*I have experienced a better education of my students by being totally virtual; not many distractions, therefore MORE TIME teaching without all the old classroom disruptions.*" Still, some teachers described online classroom management as its own challenge. For example, teachers described household members interrupting online class sessions, students distracted by household responsibilities, and challenges engaging students live on a screen for multiple hours of the school day. One teacher wrote:

> *Many students don't attend all or part of the day. Several don't pay attention at all during [Z]oom class no matter what strategies or games or activities I try. I'm expected to be assessing and progress monitoring as usual and it's just not happening...It has been very difficult working toward acceptable live behavior from most. I have spent so much time and energy contacting parents: emailing, texting, posting announcements on seesaw. The work load is endless.*

FIGURE 3.13. Classroom Instructional Challenges in Partnership Districts
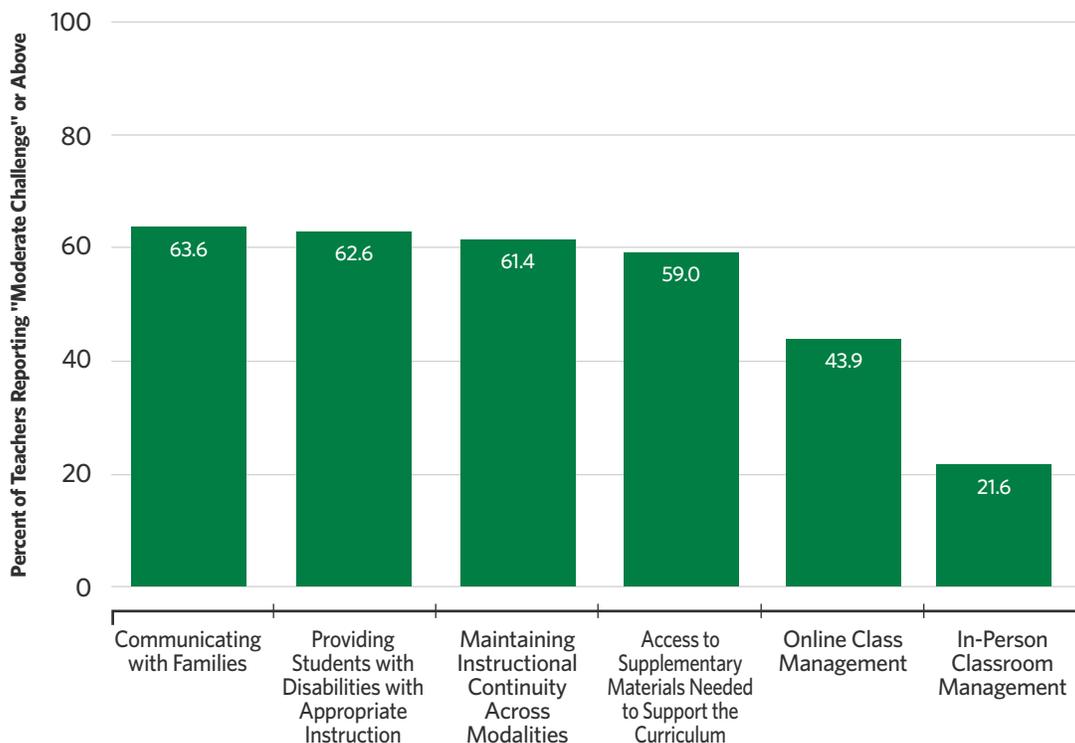
Note: Teachers were asked, "To what extent have each of the following been challenges for you in the classroom this school year?" regarding in-person and online classroom management, maintaining instructional modality, communicating with families, accessing supplementary materials to support the curriculum, and providing students with disabilities with appropriate instruction that meets their Individualized Education Program (IEP) goals. Response options were "not a challenge," "a minimal challenge," "a moderate challenge," "a major challenge," and "the greatest challenge." Bar heights provide the percent of teachers across Partnership districts who reported that each item was a moderate challenge or above. This question was asked to teachers only.

Teachers also reported challenges building relationships and trust with their students in a virtual learning format, though they perceived these challenges as less detrimental than the classroom challenges not related to classroom management. Figure 3.14 shows that more than half of teachers (57%) reported that establishing emotional connections was a moderate challenge or above, while 46% reported that building trust was a moderate challenge or above.

FIGURE 3.14. Teacher Perceptions of Student-Teacher Relations in Partnership Districts
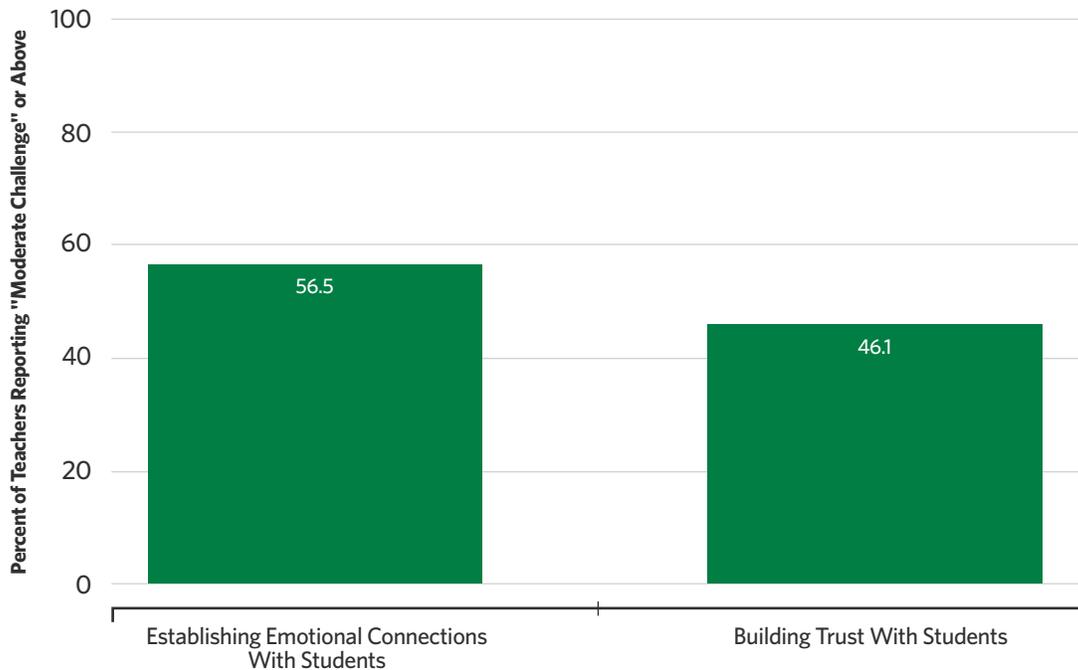
Note: Teachers were asked "To what extent have each of the following been challenges for you in the classroom this school year?" establishing emotional connections with students and building trust with students. Response options were "not a challenge," "a minimal challenge," "a moderate challenge," "a major challenge," and "the greatest challenge." Bar heights provide the percent of teachers across Partnership districts who reported that each item was a moderate challenge or above. This question was asked to teachers only.

One teacher described how these difficulties can beget different problems related to motivating students:

> This has been a hard year with all requirements and it seems difficult to build
> connections and motivate students to do work. It has been frustrating not to be able
> to meet in person with fellow coworkers. It has been something I would have never
> dreamed of in my teaching.

However, others described online learning as an opportunity to build new connections with students and their families, as we describe in more detail in Section Eight. For example, one teacher wrote,

> I was able to build that trust and a relationship because it was virtual. In-person
> learning is VERY stressful and my true self in person is VERY stressed in person

*because of the possibility for bullying, violence, insubordination, and fights. This
violent element is NOT present in the virtual setting in my inner city school. We
are still able to work and turn in work in a virtual setting and I prefer it to in-person
setting. We are able to enjoy class.*

Another teacher noted that being in students' homes, even virtually, opens up the opportunity for deeper connections:

*Believe it or not we are closer with our families than any year before, we saw the
insides of their homes and they saw mine and met my cat/husband. We have been
through a lot together and I as the lead teacher have done everything in my power to
keep them informed. They appreciate it in their own way.*

These positive teacher perceptions align with some of the findings we describe in Section Eight, as some Partnership leaders highlighted that the pandemic opened opportunities for new strategies to engage and communicate with families.

Teachers Reported Perceptions that Students with Special Needs Were Not Well-Served During the Pandemic—Especially in TPS

While educators highlighted some benefits of remote learning, they also reported that serving students with special needs was challenging during the pandemic. Figure 3.15 provides the estimated share of students with special needs whom teachers reported did not receive the full services laid out in their Individualized Education Programs (IEPs), first across all respondents in Partnership districts, then by cohort and school governance type, respectively. The first bar shows that teachers estimated that approximately 39-53% of students with special needs did not receive full services. Special education teachers responding to the survey highlighted some of the challenges they faced supporting their students' needs during the COVID-19 pandemic. One teacher noted that the strategies that are effective in supporting other students have been insufficient for students with special needs:

*Our district is doing a great deal to assist our students and families during the
pandemic. They are offering a variety of ways for students to participate in school,
delivering food and work packets to homes in addition to providing computers and
hotspots. The problem is that this does not work for many of the SXI (Severely
Multiply Impaired) students. Many of them can't use a keyboard or click or drag with
a mouse because of their impairments. Their immune systems are weak and they
have several underlying conditions so their parents prefer for them to stay home.*

Another noted that the online platform their school uses "*continues to be unsupportive for teaching deaf students*" but they still have to use it. While special needs students may be safer learning at home, their education may have suffered from the lack of technological resources and support available to them.

FIGURE 3.15. Estimated Share of Students With Special Needs Who Have Not Received Full Services
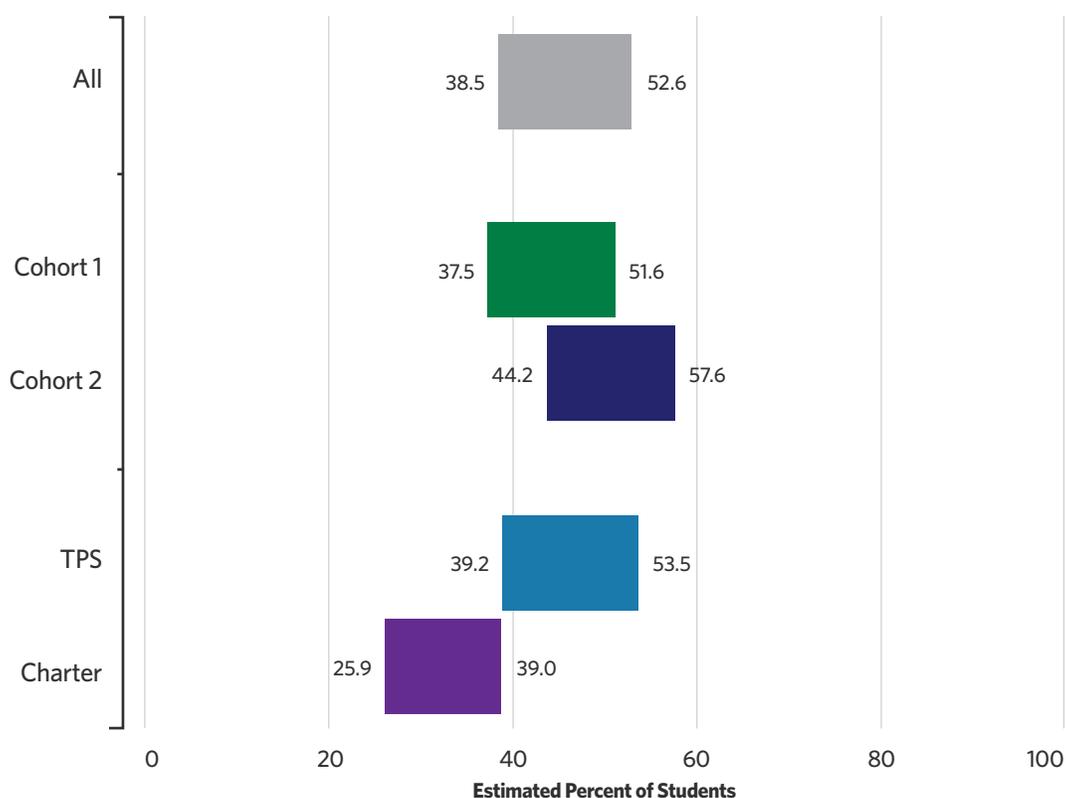
Note: Bars provide estimated range of students with special needs who have not received the full services laid out in their IEP due to COVID-19 based on responses to the question, "In this school year, approximately what proportion of your students have experienced each of the following as a result of COVID-19?" Response options were <10%, 10-25%, 26-50%, 51-75%, 76-90%, and >90%. To create estimated ranges, we assigned the minimum value of the selected response option as the lower bound and the maximum value as the upper bound. We then took the weighted mean of the lower and upper bounds, respectively. The figure to the left of each bar represents the estimated mean lower bound and the figure to the right of each bar represents the estimated mean upper bound. The first bar can therefore be interpreted as: teachers in Partnership districts estimated that 38.5% to 52.6% of their students with special needs did not receive the services laid out in their IEP due to COVID-19.

Cohort 2 teachers in particular reported that students with special needs did not receive the services laid out in their educational plans. The second set of bars in Figure 3.15 shows that Cohort 1 teachers estimated that 38–52% of their students with special needs did not receive full services, compared with 44–58% for Cohort 2 teachers. The third set of bars in Figure 3.15 shows these estimates for TPS and charters. Specifically, TPS teachers estimated that 39–54% of their students with special needs did not receive full services compared with 26–39% for charter teachers.

Teachers Did Not Believe They Had the Resources Needed to Adequately Support Students

Teachers reported that the resource gap discussed above extended beyond students' homes to the resources they had available to support their instruction. Figure 3.16 provides the share of teachers in Partnership districts who agreed or strongly agreed that they had the data and information

they needed to adequately target instruction, had the resources they needed to adequately serve students, and were able to educate their students at least as well as in prior years. The first two bars show that less than 40% of teachers believed they had the data and resources they needed to adequately support their students. Instructional resource gaps may have been even more salient during online learning as educators shifted lesson plans and materials intended for in-person instruction to remote instruction. One teacher described "*scrambling to find appropriate teaching materials to use online.*" A math teacher provided a specific example, noting that students are not able to show their work remotely in the same way they do in person:

> *As a math teacher, technology that allows me to see the students work is very important. I believe I gain more by seeing how students solved a problem. For many concepts, this involves seeing the mathematical work a student physically wrote in a notebook. It would have been nice to have the resources that allowed students to take a picture of their work and send it to me directly in an app like Seesaw.*

FIGURE 3.16. Teacher Perceptions of Their Instructional Resources in Partnership Districts
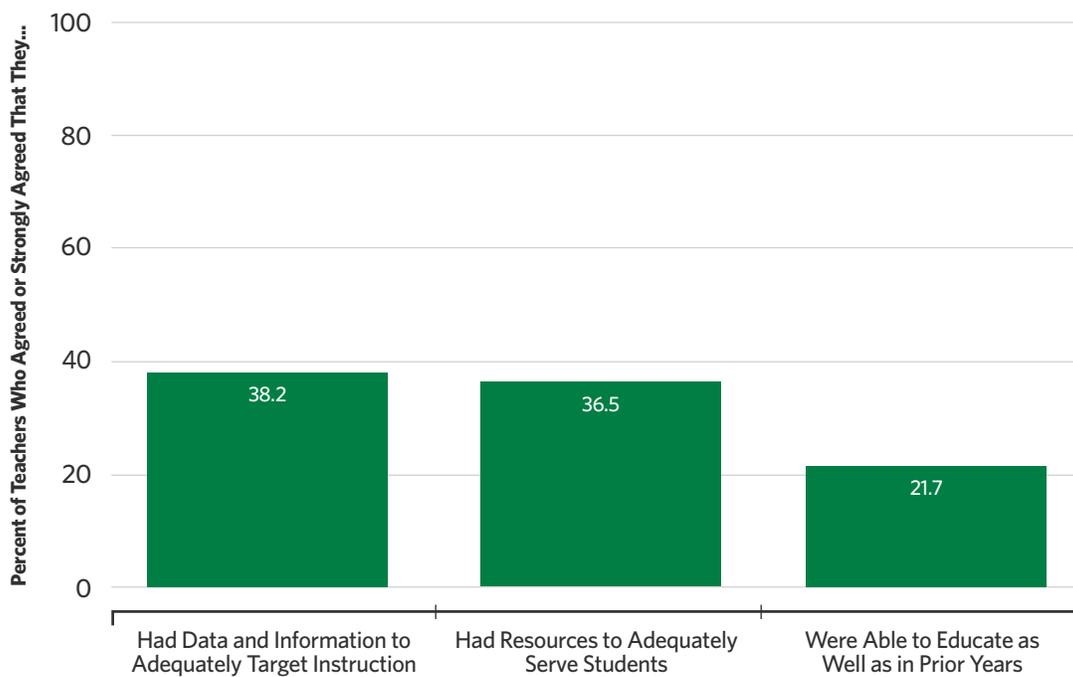
Note: Teachers were asked, "To what extent do you agree with each of the following statements?" regarding their students' access to resources related to schooling during the pandemic. Response options were "strongly disagree," "disagree," "neither agree nor disagree," "agree," or "strongly agree." Bar heights represent the percent of teachers who agreed or strongly agreed with each statement. Question asked to teachers only.

Given these challenges combined with the others described in this section, it is perhaps unsurprising that only about 1 in 5 teachers believed that they were able to educate their

students as well as in prior years. These findings underscore that the confluence of factors affecting students and educators during COVID-19 have undermined teachers' ability to teach and students' opportunity to learn. One teacher summarized how resource challenges in remote instruction detracted from student learning:

> *I think most students' grades and learning are suffering from virtual learning. Some students are thriving but the majority are not. There are many great resources out there that could improve the virtual experience but unfortunately are owned by private companies and cost money to use. With virtual learning/teaching, teachers are expected to do more than what was expected in a classroom. Teachers are becoming counselors, social workers, and advocates.*

Classroom Challenges Were More Pronounced for TPS Teachers

We examine differences in classroom challenges between TPS and charter school educators using two constructs, described in Figure 3.17.

FIGURE 3.17. Classroom Challenges Constructs

Classroom Instructional Challenges

CHALLENGES IN THE CLASSROOM:

In-person classroom management, online classroom management, maintaining continuity across modalities, communicating with families, access to supplementary materials, educating students with disabilities.

Student-Teacher Relations

CHALLENGES IN THE CLASSROOM:

Establishing emotional connections with students, building trust with students.

Figure 3.18 displays these differences. Classroom challenges, like resource challenges, were more salient for TPS than charter school teachers.

FIGURE 3.18. Differences in Instructional Challenges by School Type
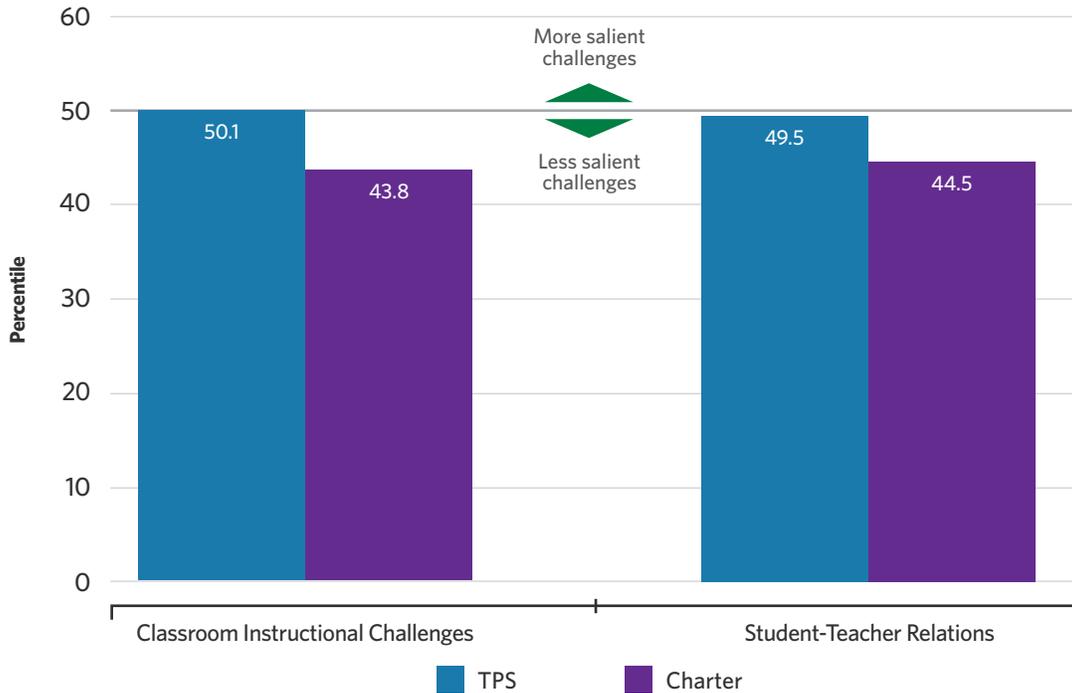
Note: Bar heights represent mean percentiles on TPS and charter school teacher responses to challenges due to classroom instructional challenges and student-teacher relations construct items. The 50th percentile represents the average for all teachers on the 2020-21 survey. A mean response above the 50th percentile line indicates that a given group reported greater challenges than the average respondent, while a mean response below the 50th percentile line indicates that a given group reported lesser challenges than the average respondent.

Combined with the findings above that student and instructional resource challenges were more pronounced in TPS schools, these findings suggest that TPS students and educators grappled with especially substantial challenges. We cannot say with certainty what drives these differences. It is possible that closing the resource gap may be more difficult at scale, leading to even starker challenges among TPS than charter schools, which tend to be smaller. It is also possible that differences in the student or teacher populations bring about different types of challenges.

Teachers and Principals in Partnership Districts Believed Students Began the School Year Behind and Would Not Meet Academic Content Standards

It is clear that educators faced unprecedented challenges in their teaching and students grappled with out-of-school factors that permeated their school experience. For these reasons, there are concerns throughout the country about students' lost opportunity to learn. Research drawing on formative assessments in other contexts suggests students have not learned as much during the pandemic as they would have in other school years (e.g., Dorn et al., 2020; Kuhfeld et al., 2020). Existing gaps in opportunity to learn between more and less advantaged students may be widening even more due to the challenges we highlighted in Partnership districts related to high levels of illness, challenges related to health care and housing stability, resource gaps, and instructional challenges. These gaps may have begun to expand in the 2019-20 school year as COVID-19 hit Partnership communities harder than others throughout the state, and continued to

grow in the 2020-21 school year as Partnership districts continued operating remotely after many other districts returned to in-person learning.

While remote schooling was a lifeline for schools and communities with high community spread, several teachers reported that it was an insufficient substitute for in-person instruction. One teacher highlighted the conflict between safety and student learning:

> When we return to face to face it will be difficult to get students back on track due to having had a full year out of the building. I believe face to face is much better [for] the students' learning but I am worried about the consequences of returning face to face too soon with COVID still out there.

To better understand educator perceptions of their students' learning, we asked teachers and principals about the extent to which they agreed that their students began the school year on track and would end the school year proficient in content standards in math, ELA, science, and social studies. Figure 3.19 provides the share of teachers and principals who agreed or strongly agreed that their students began and would end on track with content standards. By and large, educators reported that their students did not begin the year on track and had not made sufficient progress to end on track. In fact, only 15-16% of educators believed that their students began the 2020-21 school year on track and even fewer (approximately 12%) believed that students would complete the school year proficient in their subject—math, ELA, science, or social studies.

FIGURE 3.19. Educators' Estimated Share of Students Who Began on Track and Will End Proficient on Content Standards

Note: Principals and elementary teachers were asked about each subject area; secondary teachers were asked about the subject area of their primary teaching assignment. Bar heights represent the percent of educators who agreed or strongly agreed that their students began on track with content standards in each subject and would end the school year proficient in content standards for each subject. Responses are pooled across principals and elementary and secondary teachers.

SUMMARY

Partnership schools, districts, and the communities where they are located contended with deeper challenges than more affluent communities and these challenges may have exacerbated the effect of the COVID-19 pandemic for Partnership families. Partnership communities experienced higher rates of infections, and data suggest that residents who contracted COVID-19 were more likely to die than residents of other communities. Students in Partnership districts experienced these challenges acutely, as family members contracted the virus and students took on new responsibilities at home. Out-of-school challenges were especially prevalent for students in Cohort 1 schools.

As children in Partnership districts grappled with the devastating effects of COVID-19 on their communities, their schools—along with others throughout the state and country—closed their doors and shifted to remote instruction. As other districts reopened to in-person instruction during the 2020-21 school year, Partnership districts largely remained remote, and students in Partnership districts were more likely than their peers in non-Partnership districts to attend fully-remote schools. Educators and students made incredible efforts to adapt to the new learning environment. Partnership leaders distributed devices and internet information, teachers adapted lesson plans and provided instruction in a new format, and students spent hours learning from a computer screen. But the need for remote instruction shone a light on the digital divide for students in Partnership communities, as teachers reported that unreliable internet access and computing devices presented challenges in the classroom. Teachers also reported that students lacked an adequate space to learn from home and contended with distractions from other household members, new child care responsibilities, and background noise.

Importantly, the pandemic is not yet over, and it is likely that residents in Partnership communities will continue to face substantial challenges due to the inequitable health, emotional, and economic consequences of COVID-19. As a result, it seems inevitable that many of the patterns outlined in this section of the report will persist to some degree in the months and years to come.

In the remainder of this report, we highlight some of the ways in which COVID-19 pervaded Partnership districts and schools. The pandemic undermined instruction and opportunity to learn as we described above, but it also affected student enrollment, student attendance, educator morale, and potentially the composition of the teacher workforce. It is clear that the pandemic's effects will reverberate into future school years, as educators and students renew their efforts to accelerate learning.

SECTION THREE NOTES

1. It is important to highlight the limitations of these data. The gray bars show the number of students who were in a district that offered a given modality; that does not mean that every student in the district was offered that modality. These data cannot show exactly what share of students who were offered a given modality actually took it up. For example, the first bar does not necessarily mean that more than 50% of students in Partnership districts had an in-person option and less than 20% took up that option. Rather, it means that more than 50% of students in Partnership districts were in a district offering an in-person option—potentially not to all students in the district—and less than 20% took up that option.

2. There were no meaningful and significant differences in teaching and learning challenges between cohorts or between Partnership and non-Partnership schools.

3. We show in Section Six that the majority of teachers selected student attendance as the greatest challenge in their classroom this year. For this reason, we focus here on the next level of classroom challenges.

**Partnership Turnaround:
Year Three Report**

SECTION FOUR:
PARTNERSHIP'S EFFECTS ON STUDENT OUTCOMES

EPIC

**Education Policy
Innovation Collaborative**

Section Four:
Partnership's Effects on Student Outcomes

"There were so many [specific learning disability] SLD students who were already two to three grades below their peers before this pandemic, ... now these students are much more than three grades below their peers. ... These students will probably drop out because they will not be able to do the work."

—TPS Middle School Teacher, Wave 3 survey

The Partnership Model Theory of Change is intended to improve student outcomes in Partnership schools and districts, including achievement on standardized tests, graduation rates, and dropout rates. In addition, Partnership might affect student mobility; as Partnership districts and schools improve, families with educational options may be less inclined to transfer their students to other schools.

While our event study models can estimate the effect of Partnership on each of these outcomes, we are hesitant to attribute any changes in the 2019-20 school year to the Partnership Model because we cannot separate the effect of Partnership from the effect of the COVID-19 pandemic as noted in Section Two. To that end, we provide estimates of student mobility, graduation, and dropout rates from the 2019-20 school year (student achievement data were unavailable due to pandemic-induced school building closures), but caution that these estimates may reflect challenges related to COVID-19 rather than an effect of Partnership.

ON-TIME GRADUATION AND DROPOUT RATES

On-Time Graduation and Dropout Rates Remained Constant in Partnership Schools

At the time of Partnership identification, approximately 60–62% of students in Partnership high schools were graduating in four years—nearly 20 percentage points lower than the state average. Over the first two years of Partnership, Cohort 1 school-level on-time graduation rates increased slightly from 62% in the identification year to 63% in 2017-18 and to 67% in 2018-19. However, progress appeared to stagnate at the end of the 2019-20 school year amidst the pandemic, and on-time graduation rates dropped to 64%. In Cohort 2 schools, the four-year school-level graduation rate was 60% in the identification year (2017-18). It fell to 58% in the first year of implementation but then increased substantially to 66% in 2019-20.

Figure 4.1 provides our event study estimates for on-time graduation rate, with Cohort 1 in the left panel and Cohort 2 in the right.

We find that Cohort 1 follows a similar pattern to the changes in means described above, with on-time graduation rates increasing slightly in the first two years of implementation relative to the comparison schools and then dropping back down in the first year of COVID-19. Thus, it is possible

INTERPRETING EVENT STUDY GRAPHS

Throughout this section and Section Nine, we provide graphics to illustrate event study results. In these figures, the x-axis represents time, from 2013-14 through 2019-20. The vertical line at 2016-17 for Cohort 1 and 2017-18 for Cohort 2 denotes the identification year for the cohort, which is the omitted reference year upon which all estimates are based.

The markers connected by solid lines represent the coefficient estimate. These estimates represent the difference in deviation from the Partnership identification year (2016-17 for Cohort 1 and 2017-18 for Cohort 2) for Partnership schools relative to a set of similar comparison schools (see Section Two for more detail). The solid green line represents the estimated difference and the dotted lines denote a 95% confidence interval, which provides an upper and lower bound for the estimates. When these dotted lines overlap the zero line, the estimate is not statistically significant at conventional levels (i.e., $p < 0.05$). When both the upper and lower bound are above or below the zero line, the estimate is statistically significant.

that Cohort 1 schools were making progress toward increasing on-time graduation rates but gains may have been thwarted by the pandemic. However, these estimates are not significantly different from zero. This is likely because we have limited power to detect effects in a school-level analysis focused only on high schools. We therefore view these results as suggestive of a positive shift in on-time graduation rates for Cohort 1 schools leading up to the pandemic. Cohort 2 schools, in contrast, did not appear to move the needle in terms of on-time graduation rates.

FIGURE 4.1. Event Study Estimates of the Effect of Partnership on On-Time Graduation Rate
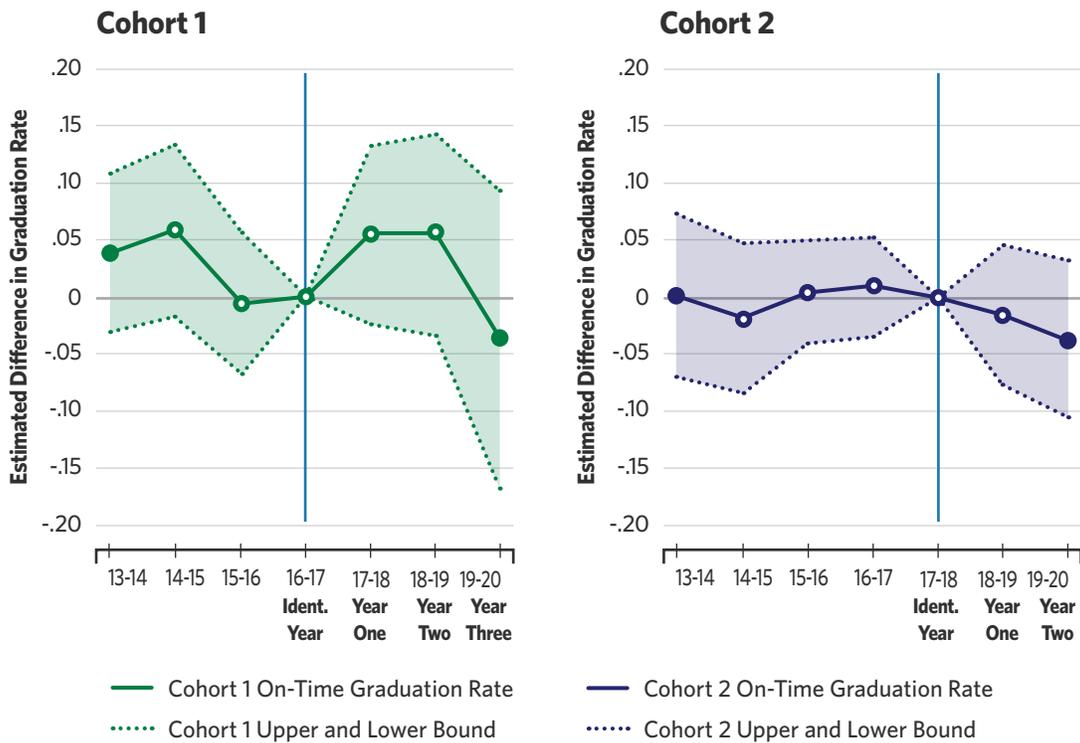
Note: Markers represent coefficient estimates on interaction between Partnership and year indicators in event study models, with the identification year (2016-17 for Cohort 1 and 2017-18 for Cohort 2) as the omitted reference year. Shaded regions represent 95% confidence intervals.

Dropout rates provide another indicator of educational attainment for students in Partnership schools. In the two Partnership identification years, the statewide dropout rate was approximately 10%. Dropout rates in Partnership schools were much higher, with 18.7% of Cohort 1 students and 20.7% of Cohort 2 students dropping out in each cohort's respective identification year. As we show in Figure 4.2 below, our event study models do not provide evidence that Partnership affected dropout rates, suggesting that neither cohort improved dropout rates relative to comparison schools. However, we again highlight the limited power to detect effects in school-level event study models and point to descriptive trends illustrated by the figures.

FIGURE 4.2. Event Study Estimates of the Effect of Partnership on Dropout Rate
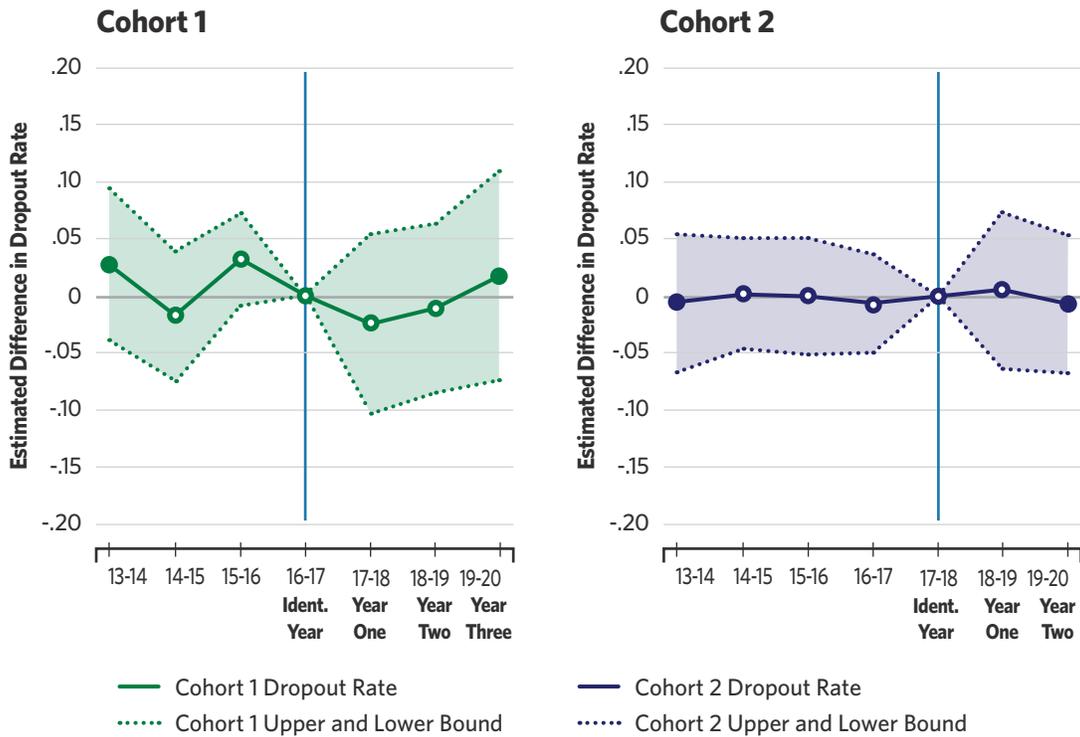
Note: Markers represent coefficient estimates on interaction between Partnership and year indicators in event study models, with the identification year (2016-17 for Cohort 1 and 2017-18 for Cohort 2) as the omitted reference year. Shaded regions represent 95% confidence intervals.

We provide the regression tables for these estimates in Appendix C.

STUDENT MOBILITY

In typical years, student mobility is a salient challenge for low-performing schools such as Partnership schools. In particular, mobility that occurs outside the school's typical feeder patterns presents challenges both for the schools that students are transferring out of and into. We refer to this type of mobility as nonstructural mobility. Unlike structural mobility, which involves student transfers based on expected feeder patterns (e.g., moving to a middle school after 5th grade), nonstructural mobility from a school may reflect family preferences or other factors related to school quality. Students may make a nonstructural transfer for a number of reasons both related and unrelated to school context. Reasons unrelated to school context include homelessness or housing instability, parents or guardians needing to move for a new job, or moving from one parent or guardian's home to another. These motivations for transfer are not in the school's control. However, other reasons for transfer do relate to the school itself, such as transferring because the school is not addressing student needs. This latter type of transfer is the type that improved processes and instruction stemming from the Partnership Model could potentially prevent.

Partnership School Students Were Less Likely to Transfer Out of Their Schools in 2019-20

We investigate two types of nonstructural public school moves: leaving the school and leaving the district. As we describe in Section Two, these two outcomes are nested; students who leave their district also leave their school. There are three reasons that students leaving their school or district might be concerning. First, as we describe in more detail in Section Five, state and federal funding is tied to student enrollment, so when students leave a school, their school and district lose student-level funding allocations. Second, a nonstructural transfer can hinder learning both for the students transferring out and in some cases for their peers (e.g., Hanushek et al., 2004a). Third, student exit can be viewed as an expression of student and family voice; those who exit may do so because they are unhappy with their experience at their current school.

Because Partnership is intended as a district-level intervention, we are also interested in students leaving the district. In TPS districts in particular, districts may be able to retain students even if the individual school is a poor fit. On the other hand, a student transferring out of the district entirely would result in lost funding for the district and require the student to readapt to a brand new context in their new learning environment.

Historically, student transfers have been higher in Partnership schools than in other schools in the state. Twenty-six percent of Cohort 1 students left their schools and 17% left their districts in nonstructural transfers at the end of the identification year. Similarly, 28% of Cohort 2 students left their schools and 19% left their districts via nonstructural transfer at the end of 2017-18. In the rest of the state (i.e., schools not in Partnership), about 11% left their schools and 9% left their districts in both identification years.

Figure 4.3 provides event study estimates for leaving the school and leaving the district. Because these models estimate a dichotomous outcome (leaving the school vs. not leaving, or leaving the district vs. not leaving), the resulting estimates can be interpreted as the difference in probability of transfer for students (relative to the identification year) in Partnership schools relative to students in comparison schools. Again, while the estimates from the first two years of implementation can be attributed to Partnership, it is unclear whether transfers in the 2019-20 school year are related to Partnership or the COVID-19 pandemic.

We find that for Cohort 1, the probability of leaving the school decreased in the first two years of Partnership, though the decrease was not statistically significant. For Cohort 2, the probability of leaving the school remained constant in the first year of implementation. Then in 2019-20, during the pandemic, students in both cohorts were about 4 percentage points less likely to leave their schools than were students in comparison schools. The fact that the confidence interval does not contain the zero line shows that these estimates are statistically significant.

The next row of event study graphs shows the change in probability of leaving the district in each year. Here, we observe an insignificant dip in the first year of Partnership for Cohort 1 followed by a rebound to identification year levels in the second year. In Cohort 2, the probability of leaving the district remained constant in the first year of implementation. For both cohorts, the probability of leaving the district increased in 2019-20 but neither estimate was statistically significant.

FIGURE 4.3. Event Study Estimates of the Effect of Partnership on Students Leaving School and Leaving District
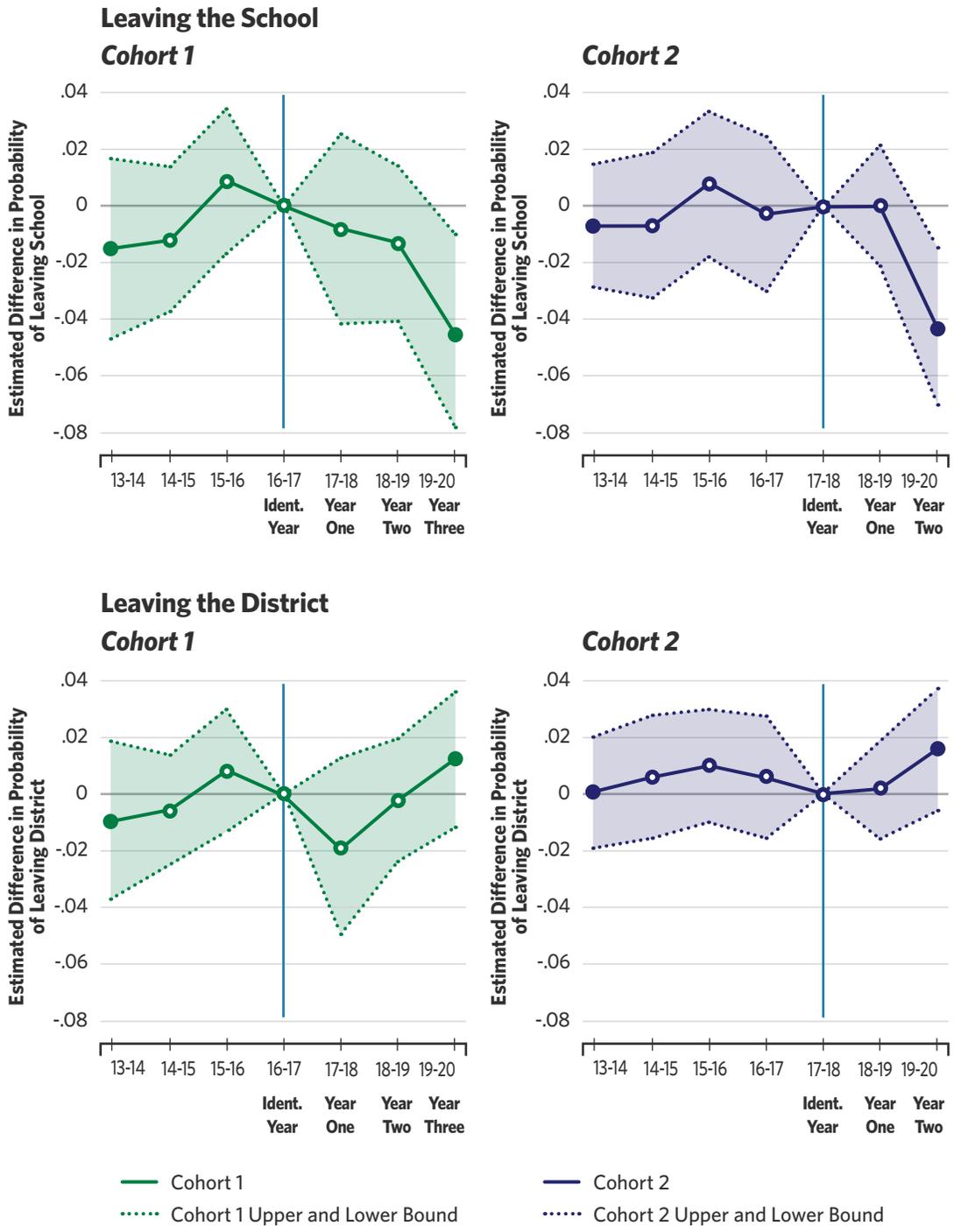
Leaving the School

Leaving the District

Cohort 1
Cohort 1 Upper and Lower Bound

Cohort 2
Cohort 2 Upper and Lower Bound

Note: Markers represent coefficient estimates on interaction between Partnership and year indicators in event study models, with the identification year (2016-17 for Cohort 1 and 2017-18 for Cohort 2) as the omitted reference year. Shaded regions represent 95% confidence intervals. Estimates can be interpreted as estimated change in the probability of leaving the school (first row) or leaving the district (second row).

Because the event study estimates are relative to a set of similar comparison schools, they do not tell the whole story of student mobility during COVID-19 in low-performing schools. To understand the extent to which students were more or less likely to leave their schools and districts during the COVID-19 pandemic in the low-performing schools in our sample, it is necessary to also look at the overall changes in these probabilities.

In Table 4.1 below, we display the coefficient estimate on the 2019-20 year indicator taken from the event study regression model followed by the coefficient estimate for the interaction between the Partnership indicator and the year indicator. The coefficient on the 2019-20 indicator provides the estimated change in probability of leaving the school or district for students in comparison schools and the interaction term reflects the extent to which students in Partnership schools were more or less likely to transfer than students in comparison schools (these are the coefficient estimates in Figure 4.2 above). For students in Partnership schools, the difference in probability of leaving the school or district relative to the omitted reference year is the sum of both of these coefficient estimates, which we provide for ease of interpretation in the third row of the table. We provide each of these estimates for the overall sample, and then separately within and outside of Detroit Public Schools Community District (DPSCD).[1]

Table 4.1 highlights five takeaways. First, across the full sample of low-performing schools (i.e., Partnership and comparison schools), students were less likely to leave their schools and districts in 2019-20. The 2019-20 transfer estimates are based on students' primary school assignment in the fall and therefore would not capture transfers out that occurred after the beginning of the 2020-21 school year. As such, we consider these a lower bound estimate on transfers, though the share of students with different primary assignments for the full school year than for the fall tends to be small—about 2%.[2] Specifically, the coefficient estimates in the 2019-20 row of columns 1 and 2 show that Cohort 1 students were approximately 9 percentage points less likely to leave their schools and 8 percentage points less likely to leave their districts, while Cohort 2 students were nearly 11 percentage points less likely to leave their schools and 10 percentage points less likely to leave their districts.

Second, the negative and significant estimates across columns show that these results are consistent within and outside of DPSCD, though the decreased probability of leaving the district is larger in non-DPSCD schools.

Third, as we showed in Figure 4.2 above, the significant estimates on the Partnership x 2019-20 interaction terms show that the change in probability of leaving the school was larger in Partnership schools than in non-Partnership schools. The insignificant estimates on these terms for leaving the district suggest that the probability of leaving the district was similar in both sets of schools.

Fourth, the Partnership effects were concentrated in DPSCD schools. Specifically, students in DPSCD Partnership schools were less likely to leave both the school (Column 3) and district (Column 4) than their district peers in non-Partnership schools (though the model predicting leaving the district is not statistically significant in Cohort 1). By contrast, students in non-DPSCD Partnership schools were not significantly more or less likely than their peers in comparison schools to leave the school or district.

Finally, the third row of each panel shows that students in Partnership districts were significantly more likely to leave their schools and districts in 2019-20 than in the omitted identification year.

TABLE 4.1. Event Study Estimates for 2019-20 Predicting the Probability of Leaving the School and District						
Cohort 1						
		OVERALL		DPSCD ONLY		NO DPSCD
	(1)	(2)	(3)	(4)	(5)	(6)
	Leave school	Leave district	Leave school	Leave district	Leave school	Leave district
2019-20	-0.089*** (0.010)	-0.080*** (0.009)	-0.092*** (0.022)	-0.046*** (0.011)	-0.087*** (0.011)	-0.085*** (0.010)
Partnership x 2019-20	-0.045** (0.017)	0.012 (0.012)	-0.075** (0.026)	-0.019 (0.014)	0.016 (0.021)	0.010 (0.019)
SUM: 2019-20 + Partnership x 2019-20	-0.134*** (0.014)	-0.068*** (0.008)	-0.166*** (0.017)	-0.065*** (0.011)	-0.071*** (0.019)	-0.075*** (0.017)
N	377,342	377,342	119,598	119,598	257,744	257,744
Cohort 2						
		OVERALL		DPSCD ONLY		NO DPSCD
	(1)	(2)	(3)	(4)	(5)	(6)
	Leave school	Leave district	Leave school	Leave district	Leave school	Leave district
2019-20	-0.106*** (0.009)	-0.097*** (0.008)	-0.106*** (0.019)	-0.030*** (0.007)	0.107*** (0.010)	-0.107*** (0.009)
Partnership x 2019-20	-0.044** (0.014)	0.016 (0.011)	-0.056* (0.022)	-0.026* (0.010)	-0.028 (0.021)	-0.004 (0.014)
SUM: 2019-20 + Partnership x 2019-20	-0.150*** (0.010)	-0.081*** (0.007)	-0.162*** (0.010)	-0.056*** (0.007)	-0.134*** (0.018)	-0.111*** (0.011)
N	642,281	642,281	179,607	179,607	462,674	462,674

Note: Cells in first two rows of each panel contain coefficient estimates from the 2019-20 year indicator and the interaction between the Partnership and 2019-20 year indicators with standard errors clustered at the school level in parentheses. Third row of each panel provides the linear combination of the coefficients in the first two rows and associated standard error. Estimates reflect the estimated deviation from the omitted reference year (2016-17 for Cohort 1 and 2017-18 for Cohort 2). Full regression table estimates are provided in Appendix C. + p<.10, * p<.05, ** p<.010, *** p<.001

Partnership School Students Were More Likely to Leave Michigan Public Education

While we find that students in Partnership schools were less likely to leave their schools and in some cases their districts in 2019-20, we find that they were more likely to leave Michigan public education altogether. When students leave Michigan public education entirely, districts, schools, and the students themselves face the same challenges as when students transfer to a new district or school because students who leave public schools necessarily leave both the district and school as well. Students may leave for a number of reasons, including to drop out, transfer to a private school or homeschooling, or leave the state.[3] However, because students in Partnership schools are more likely to be economically disadvantaged, they are unlikely to have the resources to

transfer to costly private schools or to live in homes where adults can take the time off from work to homeschool their children (Murnane et al., 2018). Additionally, as we showed in Section Three, students in Partnership schools and districts took on new responsibilities during the pandemic that may have undermined their ability to attend school. To that end, Partnership school students who leave Michigan public education are likely dropping out either temporarily or for the longer term.[4]

In the Partnership identification years, more than 4% of Partnership school students left Michigan public schools. These leaver rates were approximately two-thirds higher than in the rest of the state in those same years, when less than 3% of students statewide left Michigan public schools. These differences were even more stark in 2019-20. During or after the 2019-20 school year, about 6% of Cohort 1 students and 5% of Cohort 2 students left the Michigan public education system—compared with 2% of students statewide.

Figure 4.4 displays the estimates from the event study models. In Cohort 1, students were descriptively less likely to leave Michigan public schools entirely in the first year of implementation, though this difference was not statistically significant, and similarly likely to leave in the second year of implementation. In Cohort 2, students were similarly likely to leave in the first year of implementation. Then, in 2019-20 (Year 3 for Cohort 1 and Year 2 for Cohort 2), students in both cohorts were significantly more likely to leave Michigan public schools than their peers in comparison schools.

FIGURE 4.4. Event Study Estimates of the Effect of Partnership on Leaving Michigan Public Education
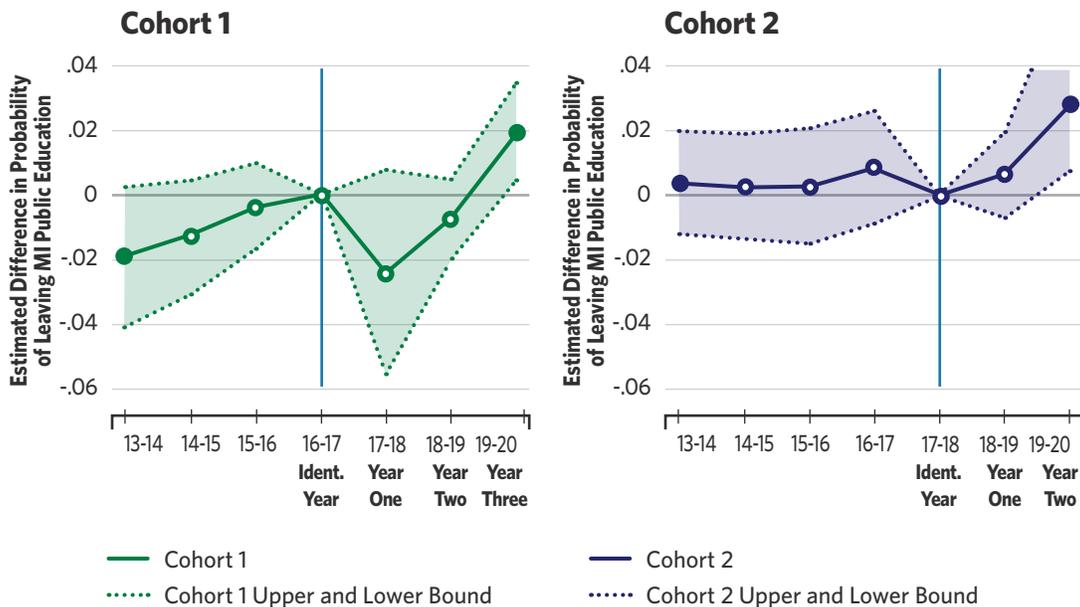
Note: Markers represent coefficient estimates on interaction between Partnership and year indicators in event study models, with the identification year (2016-17 for Cohort 1 and 2017-18 for Cohort 2) as the omitted reference year. Shaded regions represent 95% confidence intervals.

As in the case of the models predicting leaving the school and leaving the district, these graphs can only speak to the difference between Partnership schools and comparison schools—not to the change in overall probability of students in low-performing schools leaving Michigan public education. Table 4.2 provides the event study estimates of the 2019-20 indicator and the interaction between the Partnership and 2019-20 indicators for the full sample, DPSCD only, and excluding DPSCD. Students in Cohort 1 Partnership schools were about 2 percentage points more likely to leave in 2019-20 than students in comparison schools. Column 2 shows that the Partnership differences are concentrated in DPSCD schools.

The Cohort 2 story is more nuanced. Column 4 shows that Cohort 2 Partnership school students were nearly 3 percentage points more likely to leave than comparison school students but not more likely to leave than in the omitted reference year.

Columns 5 and 6 show that there are no differences between Partnership and comparison schools within and outside of DPSCD, respectively. However, across the full sample of Cohort 2 treatment and comparison schools, DPSCD students were about 3 percentage points more likely to leave and non-DPSCD students were about 2 percentage points less likely to leave.

This finding is consistent with results pertaining to district exit shown in Table 4.1, wherein students were also more likely to leave DPSCD than other districts.

Together, these results suggest that students in both cohorts of Partnership schools were more likely to leave Michigan public education than students in similar low-performing schools, but only Cohort 1 students were significantly more likely to leave than in the year their schools were identified for Partnership.

TABLE 4.2. Event Study Estimates for 2019-20 Predicting the Probability of Leaving Michigan Public Education						
	Cohort 1			Cohort 2		
	(1)	(2)	(3)	(4)	(5)	(6)
	Overall	DPSCD only	No DPSCD	Overall	DPSCD only	No DPSCD
2019-20	-0.001 (0.007)	0.014 (0.011)	-0.003 (0.009)	-0.022** (0.008)	0.036*** (0.009)	-0.030*** (0.009)
Partnership x 2019-20	0.020** (0.008)	0.016 (0.012)	-0.000 (0.008)	0.028** (0.010)	-0.007 (0.010)	0.008 (0.010)
SUM: 2019-20 + Partnership x 2019-20	0.019** (0.006)	0.030*** (0.005)	-0.004 (0.012)	0.006 (0.005)	0.029*** (0.006)	-0.021*** (0.005)
N	377,342	119,598	257,744	642,281	179,607	462,674

Note: Cells contain coefficient estimates from the 2019-20 year indicator and the interaction between the Partnership and 2019-20 year indicators with standard errors clustered at the school level in parentheses. Coefficient estimates reflect the estimated deviation from the omitted reference year (2016-17 for Cohort 1 and 2017-18 for Cohort 2). Full regression table estimates are provided in Appendix C. + p<.10, * p<.05, ** p<.010, *** p<.001.

SUMMARY

This section describes student outcomes that were measurable in the 2019-20 school year despite the COVID-19 pandemic. Specifically, we show that the Partnership Model did not significantly affect graduation or dropout rates in the first years of implementation—though we do observe that on-time graduation rates were descriptively increasing in the first two years of Cohort 1 implementation and dropout rates were descriptively decreasing in the first two years of Cohort 2 implementation. In both cohorts, on-time graduation rates in 2019-20 dropped back to identification year levels.

This section also describes the ways in which student mobility changed in low-performing schools— Partnership and non-Partnership—in the 2019-20 school year. We show that students in low-performing schools were less likely to leave their schools and districts, respectively, than in prior years. Students in Partnership schools were even less likely to leave their schools (4-5 percentage points) than their comparison school peers. However, while Partnership school students were less likely to leave their schools and districts, some were more likely to leave Michigan public schools altogether. Specifically, students in Cohort 1 Partnership schools were about 2 percentage points more likely to leave in 2019-20 than their peers in comparison schools and Cohort 1 students in the omitted reference year. Students in Cohort 2 Partnership schools were more likely to leave Michigan public education than their comparison group peers, but not significantly more so than in the omitted reference year.

SECTION FOUR NOTES

1. While our event study models account for school-level differences between Partnership and comparison schools, they would not account for differences in the students who enroll in Partnership schools. As we described in Section Two, we therefore estimated two additional sets of models in which we weighted each student based on their school's propensity to be treated. The weighted models point to very similar results in Cohort 1. The weighted estimates for Cohort 2 are substantially less precise and do not find that Partnership students were more likely to leave their schools in 2019-20.

2. At the time of writing, enrollment data were available only through the fall 2020 collection period. In other years, we deduplicate students enrolled in multiple schools using a flag from the state that identifies each student's "most primary" school assignment, which is the school in which a student is enrolled as their primary assignment for the largest number of collection periods (i.e., fall, spring, and end of year). To measure mobility out of a school in 2019-20, we use the student's primary school assignment from the fall 2020 collection period. We therefore would not capture mobility out of a school that occurred in the 2020-21 school year. In years for which we have complete data, a student who transferred to a new school or district prior to the spring collection period and remained in that school during the end-of-year collection period would be counted as enrolled in the school they transferred into. In prior years during the study period, 2% of observations had a fall primary school assignment that did not match the "most primary" school assignment. That means the estimates on leaving school and leaving district can be considered lower bound estimates and the true estimates for leaving the school may be about 2 percentage points higher.

3. While we have data on dropouts, students are counted as dropouts in the year their cohort would have graduated high school. We measure leavers in each year regardless of the student's high school cohort.

4. Indeed, a substantially lesser share of students who exited Partnership schools in 2019-20 went to homeschool or non-public school than students who exited other schools throughout the state.
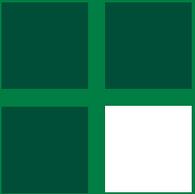
Special Section A:
Partnership and the Lowest Achieving Students

While a goal of the Partnership Model is to improve outcomes for students in Partnership schools, research from accountability reforms in other settings has found that achievement gains can be concentrated among students near the cusp of test proficiency thresholds. Research suggests that districts may triage supports to the students most likely to increase or decrease proficiency rates potentially to the detriment of other students in the school (Booher-Jennings, 2005; Jacob, 2005; Jennings & Bearak, 2014; Strunk et al., 2014). This focus on so-called "bubble students" can come at the detriment of students with the highest levels of need. Additionally, in Michigan in particular, there is evidence that No Child Left Behind waiver reforms intended to close achievement gaps led to short-run improvements, but these gains were driven by decreased performance among higher achieving students coupled with stagnant performance among lower performing students (Hemelt & Jacob, 2020). Together, these findings point to caution in interpreting positive effects of interventions in low-performing schools. Of critical importance is *which* students made gains under the intervention—and not just whether the intervention produced gains on average.

In EPIC's Year Two Report, we showed that student achievement increased in the first two years of the Partnership Model for Cohort 1 students, with some suggestive evidence of progress for Cohort 2 students. In this special section, we examine the extent to which those gains occurred among the lowest achieving students compared with their higher achieving peers. The effects

of Partnership on this lowest achieving group are especially salient given the research from other accountability contexts finding that accountability policies may incentivize schools to redirect resources away from the lowest achieving students in low-performing schools and districts. To that end, positive effects among the lowest achieving group of students would provide evidence that Partnership improved outcomes for the highest needs students in low-performing schools and did not lead educators to triage resources away from the students who needed them most.

POSITIVE EFFECTS IN COHORT 1 WERE CONCENTRATED AMONG LOWEST ACHIEVING STUDENTS

Figure A.1 illustrates the effects of Partnership for Cohort 1 students, with math in the first row and ELA in the second row. The estimated effects of Partnership for "low achievers" (students who scored in the bottom quartile on their M-STEP achievement tests relative to other students in their school in the identification year, as we describe in Section 2) are in the first column and the estimated effects for "higher achievers" (students who score in the top three quartiles) are in the second. There are two main findings. First, on average, all estimated effects are positive but not all are statistically significant. This provides some evidence that Partnership leaders and educators were not focusing narrowly on one group of students to the detriment of others. Second, the statistically significant positive effects are concentrated among low achievers in Year 1 in particular.[1] These effects are about 0.2 standard deviations in both math and ELA. Year 2 estimates are also positive, but are smaller (0.096 for math and 0.074 for ELA) and statistically insignificant.[2] These findings suggest that the Partnership Model appeared to effectively target resources toward the students with the highest level of need.

Of critical importance is which students made gains under the intervention—and not just whether the intervention produced gains on average.

We urge caution in interpreting the ELA results for low-achieving students. Specifically, the fact that the confidence interval crosses the 0 line in 2015-16 (i.e., the year prior to identification) suggests that these students experienced an achievement dip in the identification year. We therefore cannot say with certainty that ELA increases during Partnership among low-achieving students are attributable to Partnership. It is possible that the positive ELA effects for low-achieving students are driven at least in part by these students bouncing back to their pre-identification achievement levels.

FIGURE A.1. Event Study Estimates of the Effect of Partnership on Cohort 1 Student Achievement
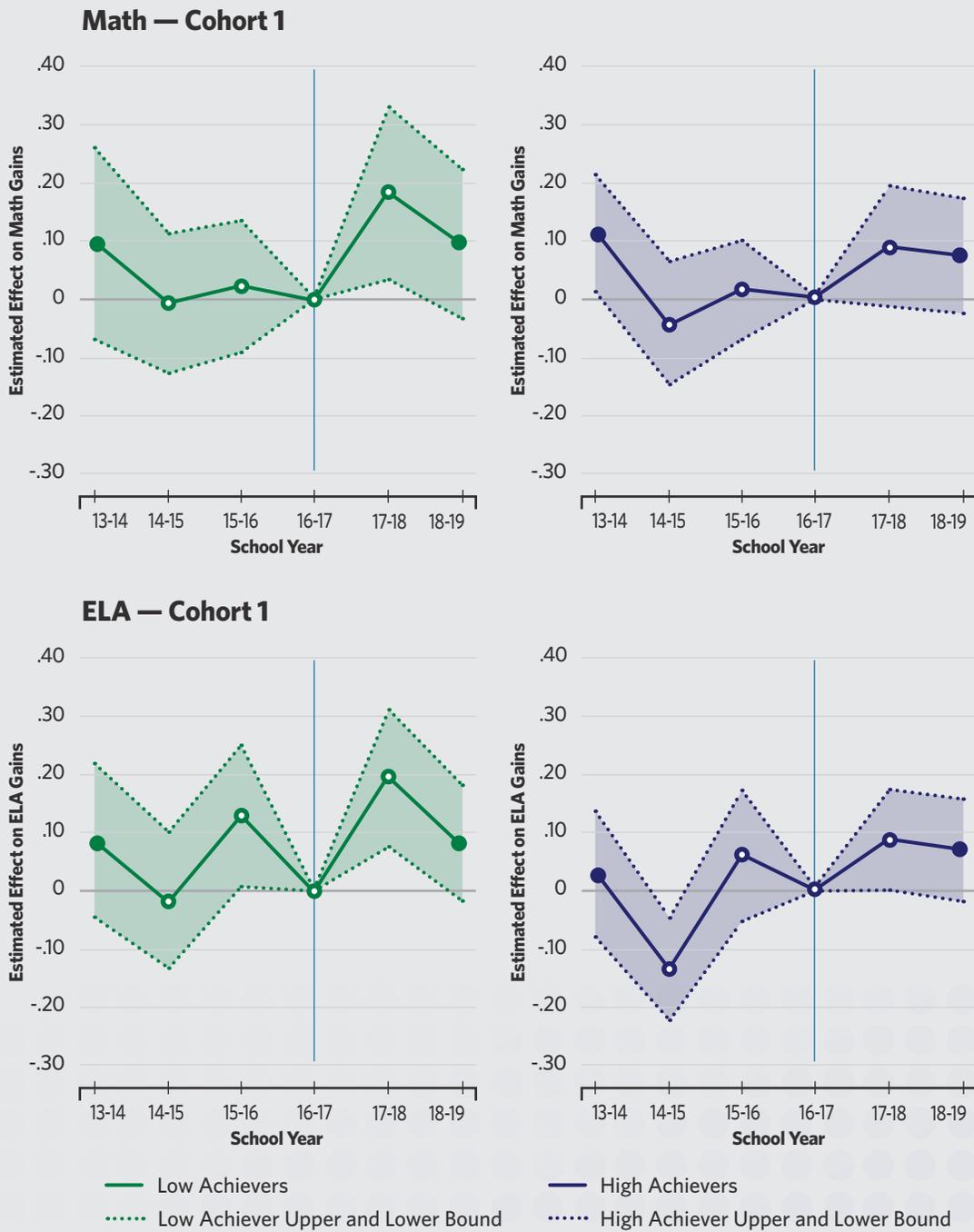
Math — Cohort 1

ELA — Cohort 1

Low Achievers
Low Achiever Upper and Lower Bound
High Achievers
High Achiever Upper and Lower Bound

Note: Markers represent coefficient estimates on interaction between Partnership and year indicators in event study models, with the identification year (2016-17 for Cohort 1) as the omitted reference year. Shaded regions represent 95% confidence intervals.

FIGURE A.2. Event Study Estimates of the Effect of Partnership on Cohort 2 Student Achievement
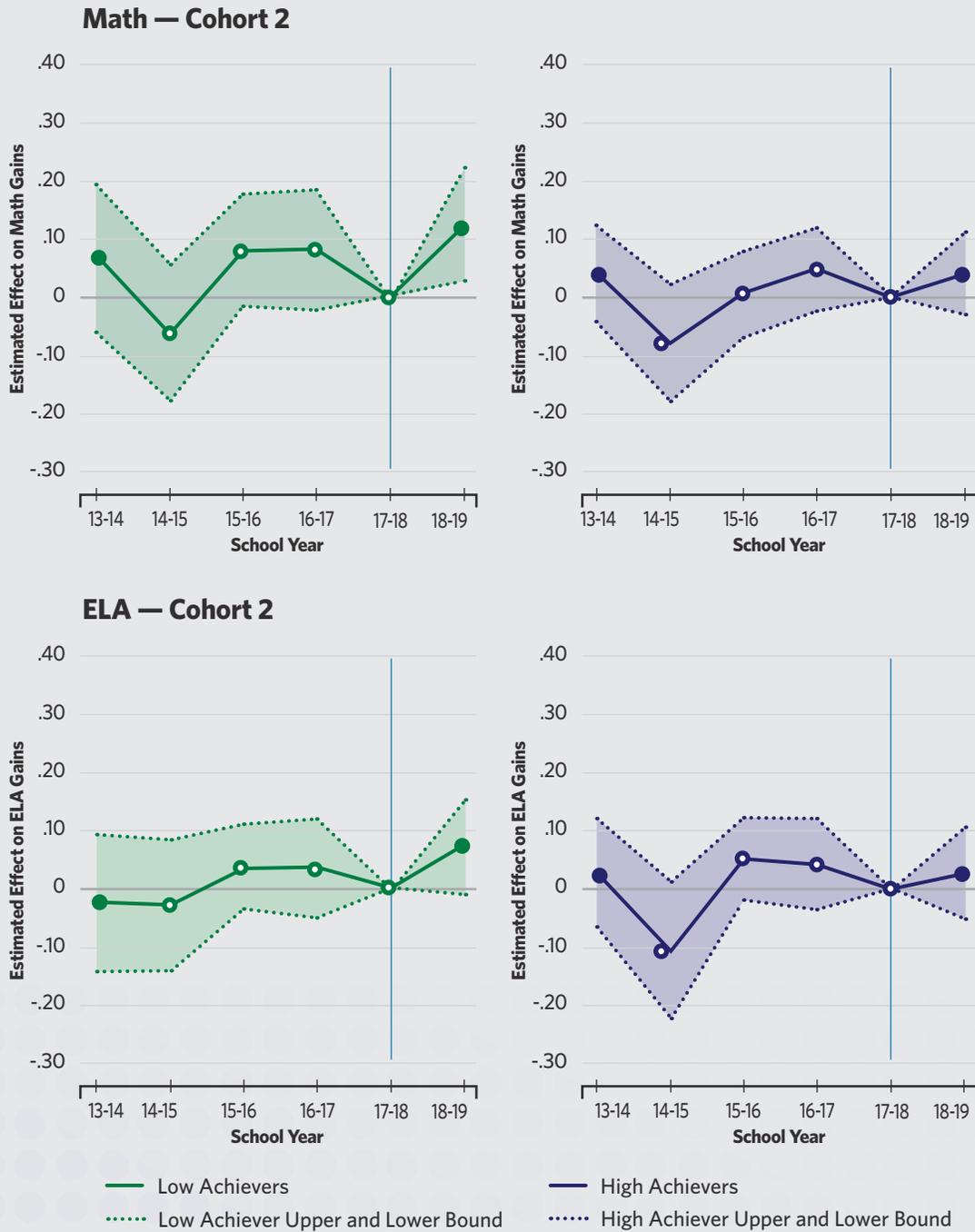
Math — Cohort 2

ELA — Cohort 2

— Low Achievers
······ Low Achiever Upper and Lower Bound

— High Achievers
······ High Achiever Upper and Lower Bound

Note: Markers represent coefficient estimates on interaction between Partnership and year indicators in event study models, with the identification year (2016-17 for Cohort 1) as the omitted reference year. Shaded regions represent 95% confidence intervals.

LOW-ACHIEVING STUDENTS IN COHORT 2 MADE SIGNIFICANT GAINS IN THE FIRST YEAR OF IMPLEMENTATION

Figure A.2 provides event study estimates for Cohort 2. While we did not find significant positive effects of Partnership on Cohort 2 student achievement (see our Year Two Report), we find that there were some positive effects for the lowest achieving students in the first year of Partnership. These effects are smaller than the first-year effects for Cohort 1, but moderately sized relative to similar interventions highlighted in the Year Two Report Executive Summary. Specifically, we find that low achievers made gains of about 0.12 standard deviations in math and 0.07 standard deviations in ELA. As with Cohort 1, we find that estimates for higher achievers are descriptively positive, but not statistically significant.

SUMMARY

The positive effects of Partnership on student achievement (highlighted in EPIC's Year Two Report) were driven largely by gains among the lowest achieving students in Partnership schools. These findings suggest that the Partnership Model may have been successfully targeting resources toward the students in low-performing schools with the highest level of need. Further, we find descriptively positive, though not statistically significant effects for higher achieving students. While research has found that accountability reforms in other contexts improve achievement for some groups to the detriment of others, we do not find evidence that gains among the lowest achieving students came at the cost of other students in Partnership schools. Together, these findings add to evidence presented in the Year Two Report that the Partnership Model was making positive changes for students in Partnership schools prior to the COVID-19 pandemic.

SPECIAL SECTION A NOTES

1   These models predict student achievement gains. The true effects are bounded by these estimates and estimates from models predicting student achievement levels. In Appendix C, we provide the coefficient estimates from both sets of models.

2   The full model results in Appendix C show that the coefficient estimates from the levels models are positive and statistically significant, providing some evidence that the true effect in Year 2 continued to be positive.

SECTION FIVE:
STUDENT ENROLLMENT AND FUNDING

EPIC

Education Policy
Innovation Collaborative

Section Five:
Student Enrollment and Funding

Our enrollment did drop tremendously. Fortunately, because of the government and the way they used our previous year enrollment— that was helpful…. We initially thought we were going to have major cuts but we were able to sustain what we were doing.

—Flames District Leader

The previous section shows that after the 2019-20 school year, students in Partnership schools were slightly more likely to leave Michigan public schools than were students in comparison schools. However, they were substantially less likely—in fact, two times less likely—to exit their own schools relative to students in comparison schools.

Student mobility, if viewed as an expression of families' and students' satisfaction with their educational experience in a school or district, is important to districts and schools from a feedback and engagement perspective. In addition, overall student enrollment trends are critical to school districts for operational and budget reasons. At minimum, operations become much more difficult when district, school, and classroom sizes decline. Fixed costs such as school buildings and various contracts remain relatively steady even as enrollments shrink. And many variable costs such as compensation for teachers, administrators, and other educators or transportation cannot decrease proportionately to student enrollment declines. If a bus is only half-filled, it still needs to operate. If a classroom is only half-filled, it still needs a teacher.

Enrollment trends are also important to Michigan school districts because school funding in Michigan is closely linked to enrollment counts. Michigan's primary state funding mechanism is a per-pupil foundation allowance that is tied to each student enrolled in the district. If a student transfers to another district or leaves the public school system in Michigan, the original district loses a portion of that student's per-pupil foundation amount (pending the timing of transfer) which the new district (if any) receives (Arsen et al., 2019). This makes student mobility and shifts in enrollment critical for school districts as they plan for future expenditures to maintain services for students.

In the remainder of this section, we discuss student enrollment trends and education funding in Partnership districts, and note how actions taken by the state amending pupil accounting calculations relieved some of the funding pressure related to shifts in enrollment for the 2020-21 school year.

PARTNERSHIP DISTRICTS WERE LESS AFFECTED BY ENROLLMENT DECLINES THAN OTHER MICHIGAN DISTRICTS

How student mobility trends translated into shifts in overall enrollment can be seen in Figure 5.1. Here we examine overall enrollment in Partnership schools (Cohort 1 in green, Cohort 2 in dark blue) relative to comparison schools (teal) and other higher-performing schools (grey) in the state. Figure 5.1 shows enrollment trends over time for schools in each group that serve different grade levels: kindergarten, elementary school (grades 1 through 5), middle school (grades 6 through 8), and high school (grades 9 through 12). We show changes in enrollment as a share of total enrollment in the 2013-14 school year to enable a clear comparison over time. These are unadjusted trends, meaning that we do not net out effects that student, school, or district characteristics might have on these longitudinal shifts in enrollment.[1]

There are several takeaways from Figure 5.1. First, it is clear that across all school types, enrollment in elementary (grades 1 through 5) has been for the most part declining since 2013-14. There is a marked differentiation point between the trends for Cohort 1 and comparison schools entering the 2017-18 school year, although Cohort 1 schools were regaining enrollment before the COVID-19 pandemic. However, the second takeaway from Figure 5.1 is that all schools in grades K-5 experienced declining enrollment during the pandemic. This is nowhere more obvious than in kindergarten, in which Michigan schools on average lost 12% of their enrollment between the 2019-20 and 2020-21 school years. Importantly, this decline was steepest in Partnership schools; Cohort 1 and 2 schools experienced 38% and 27% enrollment decreases, respectively, relative to 30% and 11% in comparison and other Michigan schools.

Third, Partnership schools fared better in sustaining middle school enrollment during the pandemic relative to other schools in Michigan. Despite a steady decline in middle school enrollment leading into Partnership identification for Cohort 1 schools, enrollment leveled off during Partnership implementation and even increased a small amount (0.8%) during the COVID-19 pandemic. By contrast, Cohort 2 and comparison schools were gaining enrollment leading into the pandemic and higher-performing schools were staying relatively steady, but all three groups experienced enrollment declines after the 2019-20 school year. Notably, Cohort 2 Partnership schools lost lower shares of students relative to comparison schools and a similar share to other Michigan schools, with only a 4% enrollment drop between the 2019-20 and 2020-21 school years relative to 11% and 3% decreases in comparison and higher-performing schools, respectively.

High school enrollment experienced much greater fluctuations over time than did other grades. However, the last panel of Figure 5.1 highlights that Partnership schools again lost lower shares of their students during the pandemic relative to both comparison and higher-performing schools. Indeed, Cohort 1 high schools saw a 7% increase in enrollment between the 2019-20 and 2020-21

school years, and Cohort 2 stayed relatively steady with a small 0.4% increase in enrollment. By contrast, comparison high schools experienced an 10% decrease in enrollment and other Michigan high schools continued to see marginal declines in enrollment each year, with a 1% decrease during the pandemic.

FIGURE 5.1. Student Enrollment Over Time
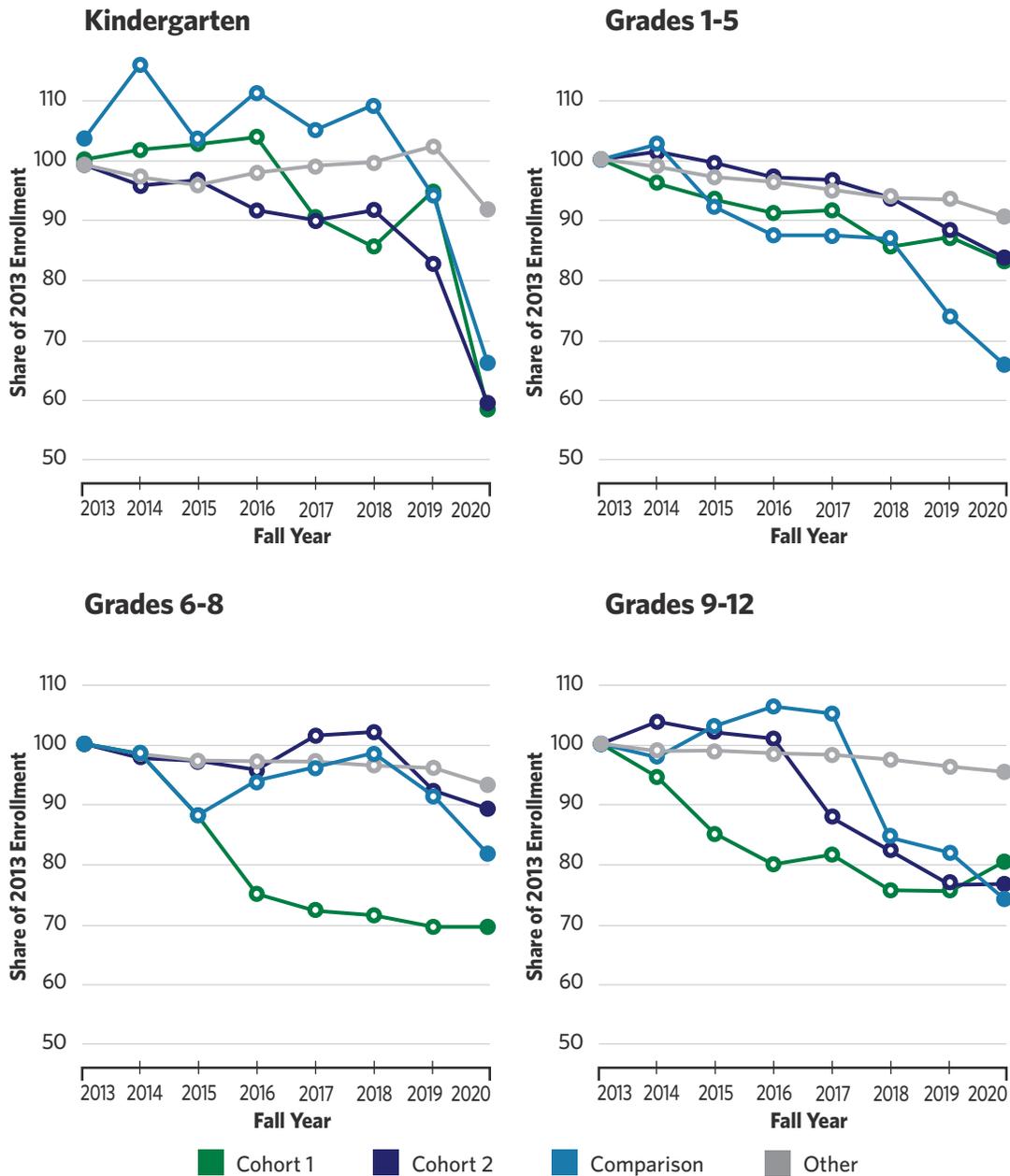
Note: Figures represent share of total enrollment in 2013-14 in the listed grade band for the year. A value above 100 indicates that enrollment is higher than in 2013-14, while a value below 100 indicates that enrollment is lower. Treatment is assigned as ever treated (e.g., a school that was in Cohort 1 but exited would be counted as Cohort 1 across all years). Sample restricted to 3,154 schools that were open for all eight years of the period from 2013-14 through 2020-21.

Partnership district leaders were cognizant of the enrollment trends shown above, and some were relatively unconcerned about their permanence. Others noted that the drop tended to be in the early elementary grades. The district leader of Red Wings explained how they saw drops in enrollment in the early elementary grades, but this was slightly offset by increases in their high school enrollment:

> *We lost about [a couple hundred] kids at the K-5 level. When we reached out to the majority of those families, the majority of those families went to private or parochial. Because it wasn't an education issue, it was a daycare issue. They indicated to us when we come back to full-person, they'll be coming back. The weird part was this. My high school increased by [a hundred or so] kids. That's weird. That was an anomaly we weren't expecting. It's kind of a weird dynamic.*

When Partnership leaders conferred with families about students' enrollment choices, they noted that families of younger children expressed the need to address the "daycare issue." This was less of a concern for older students who were able to stay at home by themselves during remote schooling.

Figure 5.2 illustrates principal reports of enrollment changes in their school from the 2019-20 to 2020-21 school year. The first bar shows that about 71% of principals reported decreased enrollment while the remaining 29% were split between principals reporting higher enrollment and principals reporting similar enrollment. The second two bars compare Partnership and non-Partnership schools, showing that slightly more Partnership school principals reported changes in enrollment than non-Partnership school principals. Specifically, 74% of Partnership school principals reported lower enrollment compared with 69% of non-Partnership school principals, while 16% of Partnership principals reported higher enrollment compared with 11% of non-Partnership school principals. Finally, the last two bars compare Cohort 1 and 2 Partnership schools, showing that more Cohort 2 than Cohort 1 principals reported lower enrollment (77% in Cohort 2 compared with 67% in Cohort 1) and more Cohort 1 principals reported higher enrollment (27% in Cohort 2 compared with 11% in Cohort 1).

71% of principals reported decreased enrollment while the remaining 29% were split higher enrollment and similar enrollment.

Together, these data suggest that enrollment dropped across the board for districts during the pandemic, but that Partnership schools may have been less affected by these declines in all grades except kindergarten. School and district leaders do not appear overly concerned about the enduring nature of enrollment declines, although as we discuss next, even short-term decreases in enrollment can have long-term effects on planning and operations.

FIGURE 5.2. Principals' Reports on Changes in School Enrollment Between the 2019-20 and 2020-21 School Years
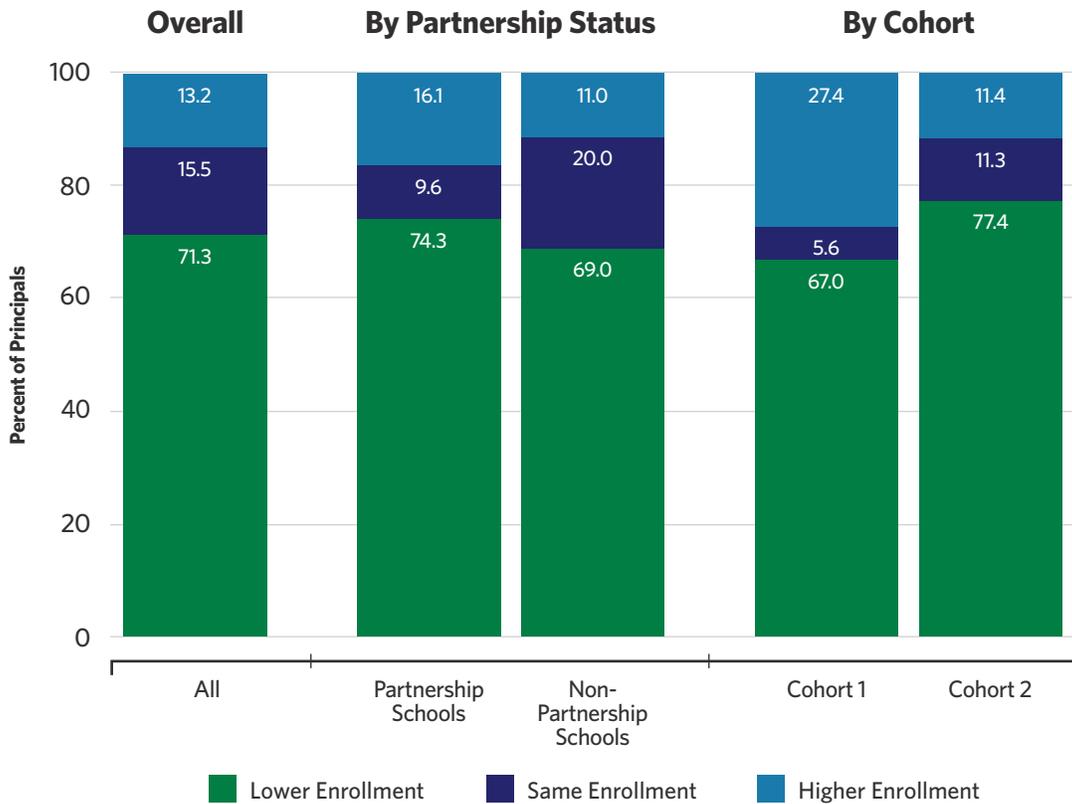
Note: Principals were asked, "To what extent has student enrollment changed this year?" Response options were "substantially lower," "somewhat lower," "the same as last year," "somewhat higher," or "substantially higher." Green bars show the share of principals who reported substantially or somewhat lower enrollment, dark blue bars show the share of principals who reported the same enrollment, and teal bars show the share of principals who reported somewhat or substantially higher enrollment.

PARTNERSHIP DISTRICTS ARE VULNERABLE TO CHANGES IN FUNDING BUT STATE ACTIONS SHIELDED THEM FROM FALLOUT IN 2020-21

Because state and federal funding is greater for districts with high proportions of low-income students, Partnership districts have higher total revenue than non-Partnership districts. However, this has not always—or even for a long time—been the case. Figure 5.3 shows that from 2014-15 through 2016-17, Partnership districts' total school funding was approximately equal to non-Partnership districts, and both remained fairly steady over time. Total school funding has been growing in each of the last three years for Partnership districts and in the last two for non-Partnership districts. Partnership district funding, on average, increased by 4%, 12%, and 12% in each of the last three years, relative to changes of -1%, 6%, and 7% in non-Partnership districts.

FIGURE 5.3. School Funding Over Time by Funding Source

2013-14

Other: 2,944 | 6,809 | 1,054 | 1,138
Partnership: 1,943 | 7,810 | 1,982 | 882

2014-15

Other: 3,170 | 7,057 | 1,022 | 2,139
Partnership: 2,215 | 8,232 | 2,125 | 753

2015-16

Other: 3,346 | 7,249 | 1,039 | 2,360
Partnership: 1,780 | 8,457 | 2,070 | 1,720

2016-17

Other: 3,386 | 7,394 | 996 | 1,842
Partnership: 1,915 | 8,630 | 2,006 | 984

2017-18

Other: 3,422 | 7,673 | 981 | 1,394
Partnership: 2,046 | 8,872 | 1,964 | 1,245

2018-19

Other: 3,605 | 7,950 | 1,028 | 1,660
Partnership: 2,319 | 9,634 | 2,044 | 1,781

2019-20

Other: 3,661 | 8,011 | 1,129 | 2,482
Partnership: 2,448 | 10,015 | 2,335 | 2,887

Revenue Per Student (2020 Dollars): 0, 5K, 10K, 15K, 20K

Legend: Local | State | Federal | Other

Note: Data from Michigan's CEPI public school finance data. N=838 districts observed in any year of data. All figures converted to 2020 dollars. Partnership districts defined as those that were ever identified as Partnership (i.e., exited districts count as Partnership in all years).

In the 2018-19 school year, the year before the pandemic hit, Partnership districts received approximately 11% more total revenue than other districts. While substantial, research in Michigan suggests that districts with high concentrations of poverty would need 39-44% more funding per student to provide their students with an adequate education (Augenblick et al., 2018). Additionally, a smaller share of Partnership district revenue comes from local property taxes, which tend to be more stable than other revenue sources. In 2018-19, the average Partnership district raised $2,319 per pupil in local revenue—36% less than other districts, which raised $3,605 in local revenue. Instead, funding in Partnership districts comes largely from federal and state sources. Because poverty rates are high in Partnership districts, they are eligible for Title I funding from the federal government, leading to nearly twice as much revenue from federal funds as other districts—though as Figure 5.3 shows, federal dollars made up a very low percentage of total revenue (13% for Partnership districts and 7% for non-Partnership districts in 2018-19).

State sources account for the largest share of revenue in both non-Partnership and Partnership districts—and state dollars are particularly significant in Partnership districts, where 61% of revenue came from the state in the year before the COVID-19 pandemic. A small portion of these state dollars comes from 21h funds targeted for school turnaround ($6 million to $7 million a year allocated across all Partnership districts). Local dollars made up only 15% of revenue in Partnership districts compared with 25% in other districts.

In the most recent year of data, collected in 2019-20, Partnership districts received approximately 16% more funding overall than other districts in the state, still far less than the estimated amount necessary to educate and support students. The distribution of revenues from local, state, federal, and other sources remained relatively constant over time.

These differences in funding sources underscore an important difference in the makeup of overall funding for Partnership and other Michigan districts. Partnership districts are unable to raise the same amount from local funds as other Michigan districts, and the disparity in funding is in part—but not completely—equalized through federal monies made available as a result of the high concentration of poverty in Partnership communities. The remainder of the gap is filled in through state funds. Both federal and state funding sources are sensitive to politics and economic downturns, making resource stability a particular challenge for Partnership districts, especially in the tumultuous years following shocks like the COVID-19 pandemic (Chingos & Blagg, 2017).

In particular, these formula-based funding sources are very sensitive to student enrollment changes because they are allocated on a per-pupil basis. In most years, per-pupil funding allocations are determined by weighting enrollment in the current school year (taken on "count day" in October) at 90% and enrollment from the previous year at 10%. The "blend" formula occurs to help districts with declining enrollment adjust to new lower funding amounts each year.

Given the enrollment fluctuation and uncertainty that occurred during the pandemic, for the 2020-21 school year student membership counts were determined by a "super blend" that weighted the 2019-20 count (90% of 2019-20 and 10% of 2018-19 enrollment) at 75% and the 2020-21 enrollment at 25% (Michigan Department of Education, 2020; Michigan House Fiscal Agency, 2020; Michigan Senate Fiscal Agency, 2020). This enabled districts to better absorb the shock of decreased enrollments.

In addition, new federal funds granted from the Coronavirus Aid, Relief, and Economic Security (CARES) Act (CARES Act, 2020) provided additional dollars to Michigan districts, and because CARES Act funds were distributed proportionally to Title I funds, districts with higher proportions of economically disadvantaged students such as Partnership districts received more per-pupil than did wealthier districts. Indeed, nearly all Partnership district leaders who responded to questions about enrollment indicated that their concerns about enrollment declines were buffered by the temporary changes in state and federal funding formulas. Rangers' charter leader said:

> *Enrollment is around the same. Actually, because of the pandemic, there's extra grant funds which are helpful. We thought that we were gonna lose more money through the state. They worked that out, so that's not a problem. It's been fine.*

Similarly, the district leader of Canadiens explained that, although they experienced a substantial drop in enrollment, federal funding helped fill the "revenue gap," *"Right now, I'm not worried about enrollment because one, we have CARES Act money that can fill the revenue gap, at least for the next two years."*

However, the Canadiens district leader went on to note that state government needed to continue adjusting pupil accounting to help districts adjust to enrollment shocks, remarking, *"I'm optimistic that the governor will create some kind of mitigation for [revenue] loss in districts, and the legislature at some level, will agree to that. I'm not as worried about [enrollment declines]."*

Thus, when it came to issues of enrollment, the majority of leaders felt protected by federal and state assistance. However, principals in Partnership districts, and in particular those in TPS districts (relative to charter schools) reported being "moderately" to "very" concerned about the loss of funding related to declining enrollment, a figure that might increase if the state does not step in to smooth pupil accounting regulations as they did between the 2019-20 and 2020-21 school years. As of July 2021, a new pupil-accounting formula had not yet been set.

SUMMARY

Partnership schools and districts are particularly vulnerable when it comes to the way Michigan finances its public schools. Because Partnership districts rely so heavily on state and federal dollars, which are more variable than local property tax-based revenues, Partnership districts will by definition face greater challenges in planning for school operations and sustained improvement strategies. Moreover, student enrollment and funding are highly intertwined in Michigan due to the state's school funding formula. While Partnership district leaders felt shielded by state and federal shifts in funding implemented to buffer districts from pandemic-related enrollment and revenue shocks, the future of these funding maintenance strategies is unknown. As a result, Partnership schools and districts will again need to plan for improvements and for learning recovery in the wake of the pandemic amidst uncertainty about their financial futures.

FIGURE 5.4. PRINCIPALS' REPORTED CONCERNS ABOUT LOSS OF FUNDING DUE TO LOST ENROLLMENT

45.5%

23.6%

30.9%

- Slight or No Concern
- Moderate Concern
- Very or Extremely Concerned
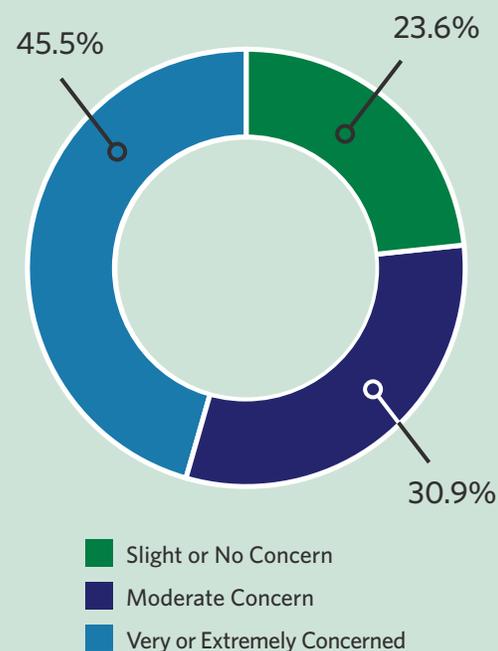
Note: Principals in 2020-21 were asked, "To what extent are you concerned about lost enrollment?" Response options were "not at all concerned," "slightly concerned," "moderately concerned," "very concerned," or "extremely concerned."

SECTION FIVE NOTES

1. These analyses are descriptive in nature because at the time of writing, we did not yet have the school-level covariates necessary for event studies. We will examine these trends in a causal framework using event study models once the data are available.

**Partnership Turnaround:
Year Three Report**

SECTION SIX:
STUDENT ATTENDANCE

EPIC

**Education Policy
Innovation Collaborative**

Section Six:
Student Attendance

Attendance has been more of a challenge. Attendance and academics have been more of a challenge.

—Jets District Leader

Earlier sections of this report and reports from the last two years of the study have highlighted the many challenges facing Partnership districts, schools, and students, as well as the communities in which they live. As is outlined in Section Three, the COVID-19 pandemic has been especially devastating for Partnership districts and their students and families. Students and families faced extraordinary health, housing, and economic challenges as a result of the pandemic, exacerbating already apparent inequities in these areas that had gone unresolved even before March of 2020.

High rates of COVID-19 infection and death in Partnership communities alongside other community-based factors caused Partnership districts to rely largely on remote instruction for much if not all of the school year. Even when Partnership districts offered in-person instruction, many families opted to continue learning remotely. And yet, students in Partnership districts lacked basic resources to enable them to learn outside of school buildings and teachers believed that they were unable to educate their students as well as they had in previous years (see Figure 3.16).

It does not come as much of a surprise, then, that Partnership leaders and educators surfaced student attendance and engagement as a substantial challenge during the 2020-21 school year. In what follows, we discuss issues related to student attendance and educators' abilities to engage students in the COVID-19 context.

STUDENT ABSENTEEISM A KEY CHALLENGE

Unfortunately, given changes in the ways Michigan districts collected data on student attendance and absenteeism during the 2020-21 school year, there is no administrative data source that will enable us to understand students' daily attendance in the past year. However, survey data shown in Figure 6.1 suggest that absenteeism was a substantial problem in the 2020-21 school year. Partnership school teachers reported that 27-46% of students were absent each day, and principals estimated that the problem was even more severe, with 32-51% of students absent on a given day. Absenteeism appeared to be worse in Partnership than in non-Partnership schools; teachers and principals in non-Partnership schools reported that 18-35% and 19-38% of students were absent each day, respectively.

FIGURE 6.1. Teacher and Principal Reports of Estimated Student Absenteeism
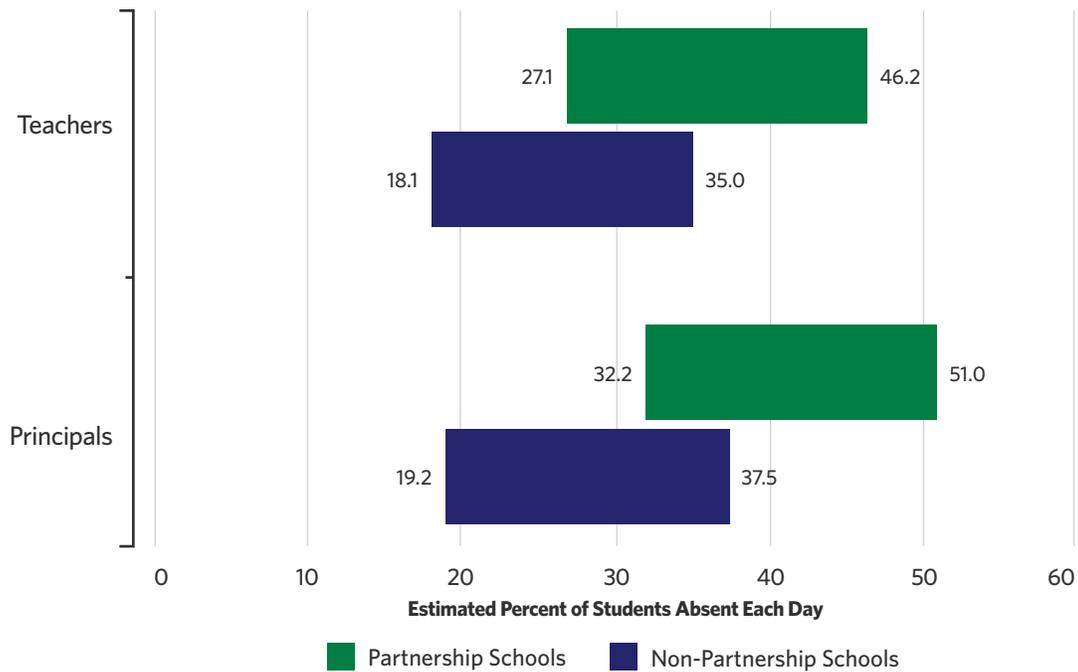
Note: Bars provide estimated range of daily student absenteeism in February 2021 based on responses to the question, "Think about student absences over the last month. Approximately what percentage of your students were absent from school (for all or part of the day) each day?" Response options were <10%, 10-25%, 26-50%, 51-75%, 76-90%, and >90%. To create estimated ranges, we assign the minimum value of the selected response option as the lower bound and the maximum value as the upper bound. We then take the weighted mean of the lower and upper bounds, respectively, across all respondents in a category (e.g., teachers in Partnership schools). The figure to the left of each bar represents the estimated mean lower bound and the figure to the right of each bar represents the estimated mean upper bound. The first bar can therefore be interpreted as: teachers in Partnership schools estimated that 27.1–46.2% of their students were absent each day.

One possible reason that Partnership districts may have experienced lower student attendance during the 2020-21 school year was their greater propensity to operate remotely (see Section Three for details). Indeed, Partnership leaders noted the difficulties their educators faced trying to engage students in a virtual format as being one of the most significant challenges their districts were currently facing. For example, the Jets district leader explained that even after providing all the necessary resources for students to log on, connectivity was still an issue:

> *Just getting our students to connect every day so that we can educate them has probably been the most challenging thing. It's not that our children don't have devices and they don't have the hot spots to connect via the internet, because we've provided all of that to our families who said that they were in need, so they have devices. They have hot spots. They can log on. It's just that a lot of them are choosing not to, so that's probably been the most challenging thing for us this year.*

Similarly, the pandemic itself, and all of its associated stressors, may have led to decreases in attendance. The Lightning charter leader told us:

> *There've also been tremendous stresses—loss of jobs and money and food and all of these basic things. It's taken its toll. Usually, we're around in person you're more aware as a school and as a staff on who needs what. I can tell [what you've been] doing, but I'm not confident that we've been able to get to everyone because we have some kids that aren't even logging on. Those are the ones that I'm most worried about, right? What's happening with them.*

However, while some Partnership leaders discussed their challenges maintaining student attendance, others noted that attendance rates went up during the 2020-21 school year. For instance, the Flyers charter leader said:

> *Well, interestingly enough, just going off of data, the chronic absenteeism data that we're monitoring for the Partnership Agreement has improved significantly mostly because grades 9 through 12 are able to get into class whereas otherwise, maybe they had some obstacles in their way that didn't allow them to actually show up to school before. The high school attendance has improved dramatically.*

The remote format of schooling may also have improved parental engagement in some districts, as families and guardians were more able to access teachers through virtual platforms. The district leader of Red Wings explained:

> *Our attendance rate in classes has been better than it's ever been, from a virtual standpoint. In-person attendance at the beginning of the year, we actually out-performed in-person attendance by using the virtual model only. It was a shock because you wouldn't expect it. Our parental involvement has increased exponentially. Parents are actually getting involved. They're talking to the teachers. They're asking for help.*

A few Partnership leaders even noted that virtual options allowed students who otherwise had factors preventing them from consistently attending school to have a more flexible option, which has helped raise their attendance rates.

Several Partnership leaders said they used increased funding to hire attendance agents or officers to primarily support students and parents with attendance issues and challenges. The district leader of Jets went on to say:

> *Our goals are around academics, attendance, and behavior, and we've been able to place an attendance agent at all of our schools, and the attendance agent's job is—they're primarily responsible for managing those students who have attendance issues, contacting their families, seeing what the attendance issue is, and having them—helping them to navigate through whatever barrier they may be facing with attendance.*

Thus, while many leaders did not feel that attendance issues had been exacerbated by the pandemic, they also noted the continuation of existing challenges with student absenteeism and discussed the increased resources and funding made available to help resolve attendance concerns.

FIGURE 6.2. Teacher Reports of the Challenge of Educating Students Who Do Not Consistently Attend Class

Teacher Perceptions of the Extent of Challenge Educating Students Who Do Not Consistently Attend Class
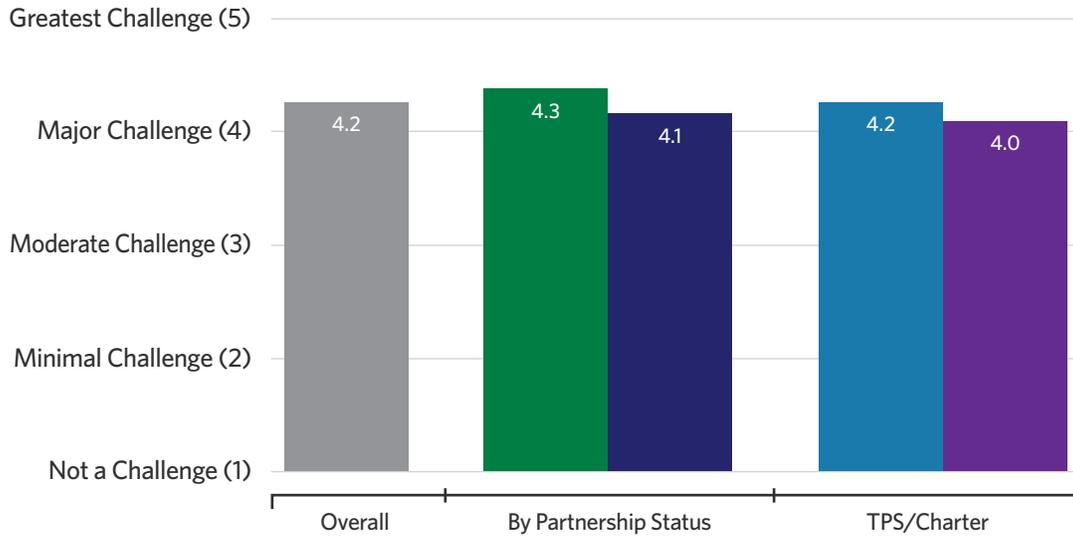
Percent of Teachers That Said Educating Students Who Do Not Consistently Attend Class Was "the Greatest Challenge" in the Classroom This Year

Legend:
- All
- Partnership Schools
- Non-Partnership Schools
- TPS
- Charter
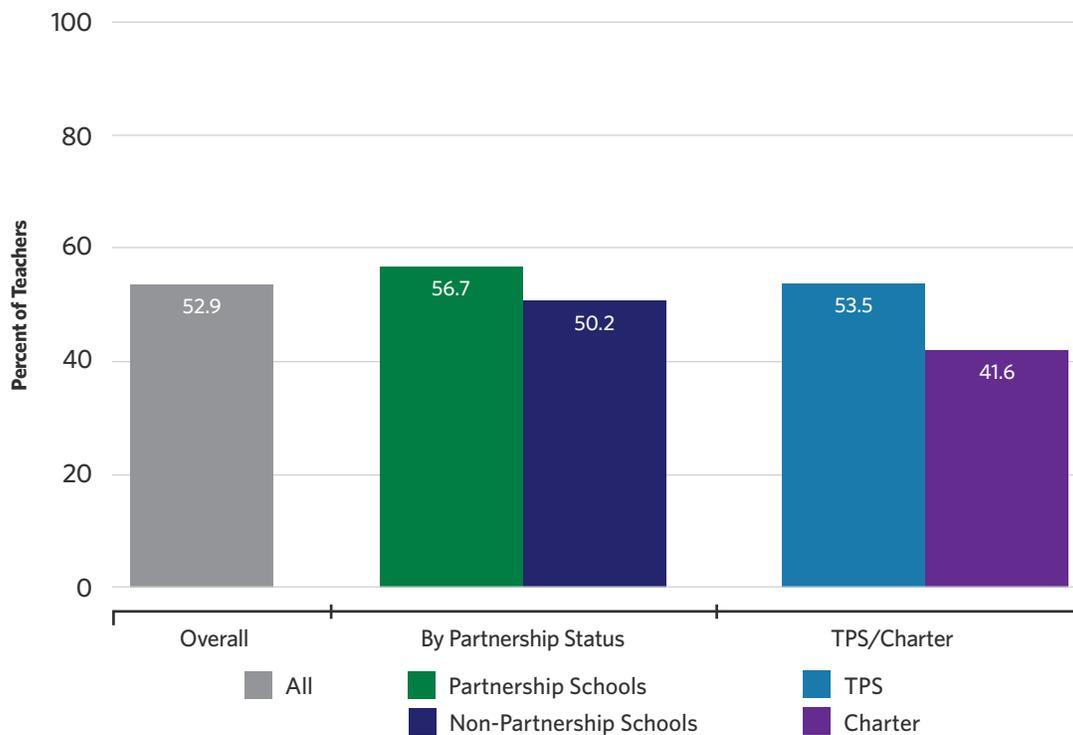
Note: Teachers were asked, "To what extent have each of the following been challenges for you in the classroom this school year?" Response options were "not a challenge," "a minimal challenge," "a moderate challenge," "a major challenge," and "the greatest challenge." Bar heights for the top panel provide the mean response on a 1–5 scale, with 1 representing "not a challenge" and 5 representing "the greatest challenge." Bar heights for the bottom panel provide the percent of teachers who reported that "Educating students who do not consistently attend class" was the greatest challenge. This question was asked to teachers only.

However, teachers felt that attendance challenges affected their ability to educate students, likely impeding student learning during the pandemic. Indeed, teachers said that educating students who did not attend was their top classroom challenge this year. Figure 6.2 shows teachers' responses when asked the extent to which it had been a challenge educating students who did not consistently attend class, with the top panel providing the mean teachers response to the question on a five-point scale and the bottom panel providing the share of teachers reporting that attendance was the greatest challenge in the classroom this year.. All teachers in Partnership districts noted that this had been more than a "major" challenge and over half of them said that this was the greatest challenge in their classrooms this year, with Partnership school teachers and TPS teachers reporting it as a greater impediment than non-Partnership school teachers and charter school teachers.

SCHOOLS IN PARTNERSHIP DISTRICTS INCREASED THEIR FOCUS ON STUDENT ATTENDANCE IN 2020-21

School leaders in Partnership districts worked to address the substantial challenges with student attendance that occurred during the 2020-21 school year. Figure 6.3 shows that, relative to earlier years in which principals reported that student attendance was a "major" focus for Partnership schools and a "moderate" focus for non-Partnership schools, in 2020-21 all principals in Partnership districts believed that student attendance had become a "major" to "primary" focus. Although Partnership teachers believed that their schools were paying less heed to attendance than principals, they also believed it received more attention in the 2020-21 school year than in previous years.

FIGURE 6.3. Educator Reports of School Focus on Student Attendance Interventions, by Study Year
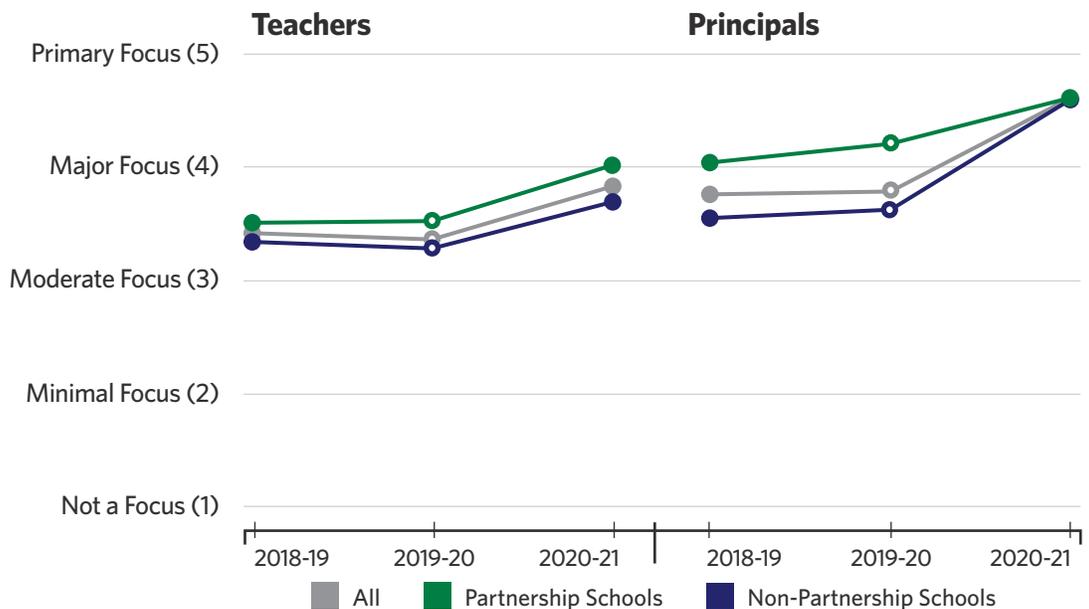
Note: Teachers and principals were asked, "In the [current] school year, to what extent are each of the following areas a focus in your school?" Bar heights provide means of teacher (left panel) and principal (right panel) responses to the response item "Student attendance interventions." Response options were "not a focus," "a minimal focus," "a moderate focus," "a major focus," and "the greatest focus."

Although not shown here, more than two-thirds of principals in Partnership districts reported that student attendance had become the "greatest" focus during the 2020-21 school year, a dramatic increase relative to the 21% of principals who reported the same in the 2019-20 school year.

SUMMARY

Together, our survey and interview data highlight the ways in which the COVID-19 pandemic exacerbated concerns about student attendance, an issue that already plagued Partnership districts before March of 2020. Reducing student absenteeism will be even more critical in the 2021-22 school year as MDE announced in late July 2021 a return to pre-pandemic requirements for attendance. Specifically, these provisions require a district attendance rate of 75% or higher for at least 180 days. The state will reduce aid to districts that fail to meet the attendance threshold.[1] Although virtual schooling enabled greater parental engagement in some ways and allowed some older students to attend school when they otherwise might not have, educators expressed trepidation about the effect of absences on their abilities to adequately educate their students.

SECTION SIX NOTES

1. The MDE memo to districts is available at
    https://www.michigan.gov/documents/mde/PA2021-22_School_Year_731222_7.pdf

**Partnership Turnaround:
Year Three Report**

SECTION SEVEN:
A SHIFTING UNDERSTANDING OF ACCOUNTABILITY

EPIC

**Education Policy
Innovation Collaborative**

Section Seven:
A Shifting Understanding of Accountability

"It's a new frontier, new horizon, new situation we're in right now. I thought about that. I'm like, 'We're scheduled to go through our review in the fall. How do you account for some of the things that we're dealing with?' At the end of the day, we still have to have our students grow and achieve..."

—Hurricanes Charter Leader

Nationally, school accountability policy has shifted away from the sanction-based system that was ushered in by No Child Left Behind and toward a supportive set of interventions intended to build school and district capacity. As we described in the Year Two Report, the Partnership Model's trajectory has followed a similar path, with a decreased emphasis on accountability as implementation proceeded. Figure 3.3 of EPIC's Year Two Partnership Report in particular shows that educators' beliefs that their school would face consequences if they failed to meet school goals declined over time. This decreased focus on high-stakes accountability became more pronounced in the 2019-20 and 2020-21 school years, in part due to the COVID-19 pandemic. As did other states, Michigan canceled state standardized achievement tests in the spring of 2020. While Michigan administered tests in the 2020-21 school year, the U.S. Department of Education granted a waiver from the use of tests to meet accountability requirements under the ESSA.

In this section, we first describe how educators perceived accountability and goal monitoring during the COVID-19 pandemic. Next, we describe shifts over time in Partnership districts' focus on academics—one proxy for understanding the extent to which schools were centering the academic goals laid out in their Partnership Agreements. We then describe educator concerns about learning, testing, and student outcomes within the accountability context. Next, we summarize the results from the RGA process, a process wherein school leaders, district leaders, and state education officials meet at the 18-month and 36-month intervention points to discuss progress toward their school improvement goals. Finally, we conclude with a summary of findings.

PARTNERSHIP DISTRICTS CONTINUED TO MONITOR IMPROVEMENT GOALS DURING THE PANDEMIC, THOUGH EDUCATORS CITED CHALLENGES

Monitoring improvement goals is a central element of the Partnership Model. Even as Partnership shifted away from a system of sanctions, districts were still expected to continue monitoring progress toward the improvement goals set out in their Partnership Agreements. Educators largely continued goal monitoring during the pandemic. Figure 7.1 shows the percent of educators who agreed or strongly agreed in 2020-21 that their school was monitoring goal attainment, highlighting three findings. First, the majority of educators in Partnership districts—approximately 59% of teachers and 74% of principals—reported that their schools were monitoring their Partnership goals in the 2020-21 school year. Second, goal monitoring was even higher in charter schools. Specifically, the second two bars in each panel show that charter school educators were about 20 percentage points more likely to agree that their schools were keeping tabs on goal attainment than were their TPS peers. This difference between TPS and charter educators aligns with findings

The majority of educators in Partnership districts reported that their schools were monitoring their Partnership goals in the 2020-21 school year.

highlighted in Special Section B, where we show that charter school educators are more aware of improvement goals. Third, principals report greater attention to goals than do teachers. This finding is perhaps unsurprising, as principals also reported that they were more aware of their Partnership goals (discussed in Special Section B) and they may be held more directly responsible for goal attainment.

FIGURE 7.1. Educator Perceptions That Their School Was Monitoring Goals
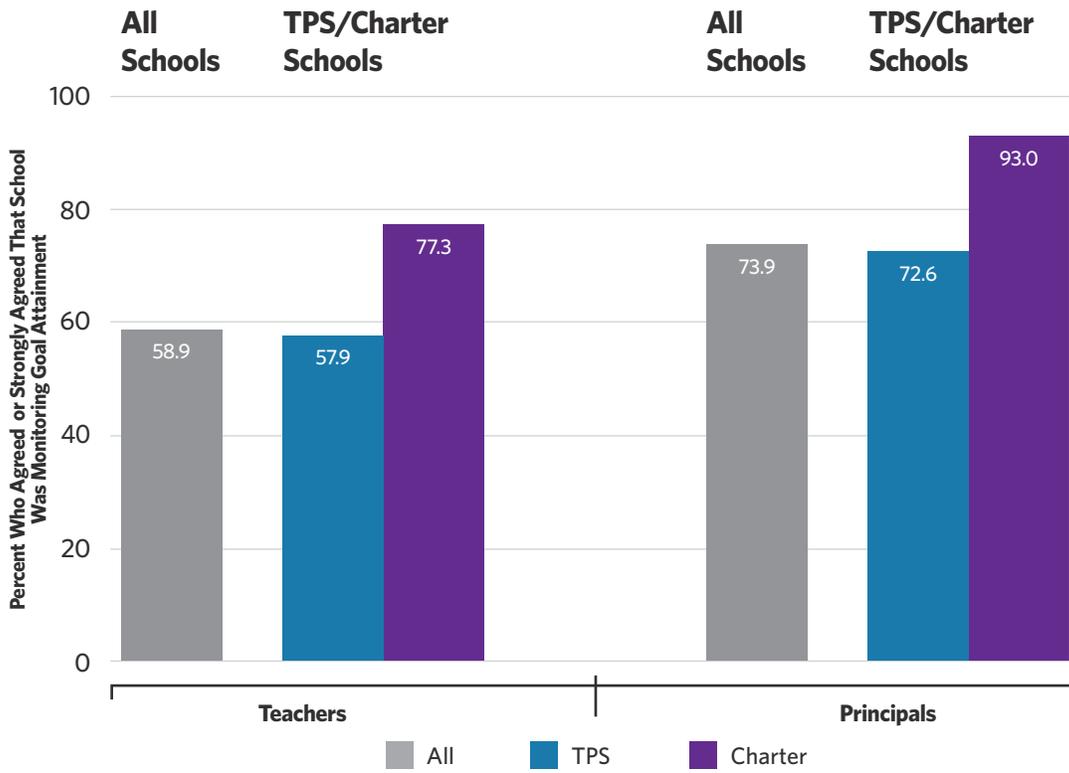
Note: Educators were asked about the extent to which they agreed with a series of statements about improvement goals. Response options were "strongly disagree," "disagree," "neither agree nor disagree," "agree," or "strongly agree." Bars show the percent of teachers and principals who agreed or strongly agreed with the statement that their schools were monitoring goal attainment this school year.

While Educators Were Monitoring Goals During the Pandemic, They Cited Challenges Related to Data, Feasibility, and Capacity

While, on average, educators believed their schools were monitoring goals in the 2020-21 school year, monitoring was likely complicated by the pandemic for several reasons, made clear in Figure 7.2, which provides teacher and principal perceptions of the relevance and feasibility of goals during the COVID-19 pandemic (left side) and the extent to which progress monitoring was inhibited by lack of data or capacity (right side). First, nearly half of Partnership district educators believed that their improvement goals were simply less relevant than other student needs during the pandemic. For example, one teacher respondent to the survey wrote, *"Much of the stress and strain on kids has come from forced district pacing guides and lofty instructional/assessment goals for students who are barely surviving a pandemic."*

Second, approximately 60% of Partnership district educators reported that their Partnership goals were not feasible given the pandemic. In particular, educators may have been working to address other challenges related to the pandemic, leaving them with limited capacity for goal monitoring. To that end, approximately 70% of Partnership district teachers and principals believed that monitoring goal progress was inhibited because of capacity constraints on

educators. Third, many Partnership Agreement goals are based on standardized achievement tests such as targets to increase proficiency rates and/or growth on M-STEP. Since 2019-20 summative assessment data were not available due to pandemic-induced school building closures, it would have been difficult for educators to track progress on this indicator. Indeed, nearly 60% of teachers and almost two-thirds of principals felt that monitoring progress towards these goals was difficult due to a lack of data.

FIGURE 7.2. Educator Agreement About Goal Monitoring and Feasibility During Pandemic
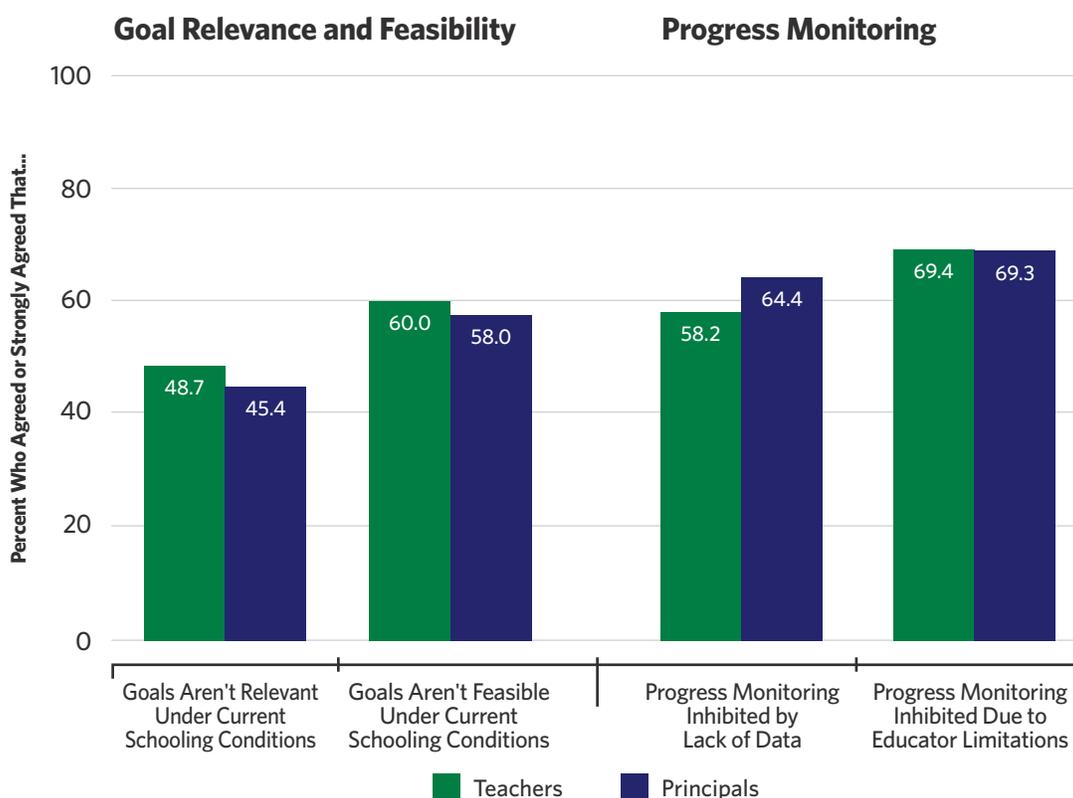
Note: Teachers and principals were asked, "To what extent do you agree with the following statements?" Response options were "strongly disagree," "disagree," "neither agree nor disagree," "agree," or "strongly agree." Bars show the percent of educators who agreed or strongly agreed that goals were not relevant, goals were not feasible, monitoring was inhibited by lack of data, and monitoring was inhibited by educator limitations during the 2020-21 school year.

Schools Maintained a Focus on Academics Even During the Pandemic

Even though goal monitoring was challenging during the COVID-19 pandemic, Partnership district educators report a continued focus on academics during the 2019-20 school year. This suggests that even in the absence of traditional accountability markers, Partnership educators were still centering elements of their Partnership Agreements. In order to examine academic focus in Partnership schools and districts, we explore changes over time on a construct that represents teachers' and principals' perceptions of the extent to which their school was concentrating on academics. We describe the elements included in this construct in Figure 7.3.

FIGURE 7.3. Academic Focus Construct

Pillars of Academic Focus

Educators' perceptions of the extent to which their school focused on academics:

I Curriculum and Instruction

II Assessments

III Data-Driven Instruction

IV Academic Improvement for Students on the Cusp of State Test Levels

V Academic Improvement for Special Populations
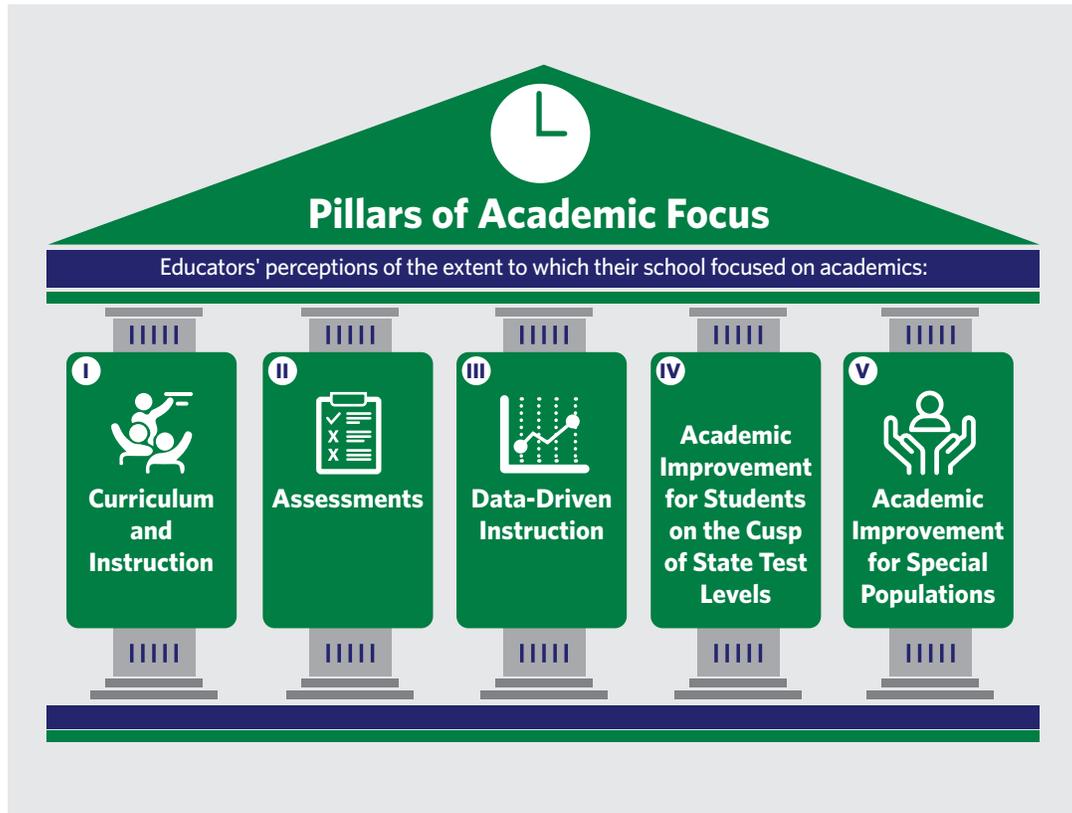
While many of these items are hallmarks of school improvement, they particularly reflect centering accountability-driven improvement. For instance, assessments and "students on the cusp," also known in the literature as "bubble kids," are particularly accountability oriented. A consistent focus on academics and assessment over time could suggest that the target on these goals remained stable.

Figure 7.4 highlights several salient points about educators' continued focus on academics and assessments. First, Partnership school educators consistently reported a greater focus on academics and assessments than did their peers in non-Partnership schools. This may reflect the weight of the accountability pressures facing Partnership schools in particular. Second, principals consistently reported a stronger academic and assessment focus than did teachers. Third, educators in Partnership districts—both in Partnership and non-Partnership schools—perceived an increased academic focus between the 2018-19 and 2019-20 school years, with Partnership school educators—and particularly Partnership school principals—reporting the greatest gains. Again, this suggests that Partnership may have caused educators to increase their focus on academics in order to meet their Partnership goals. However, during the pandemic, Partnership educators for the most part perceived a slight decline in their focus on academics, although it remained greater than the attention paid to academics and assessments in 2018-19. Teachers in non-Partnership schools reported the greatest decline in academic focus during the pandemic.

FIGURE 7.4. Educator Perceptions of Academic Focus Over Time
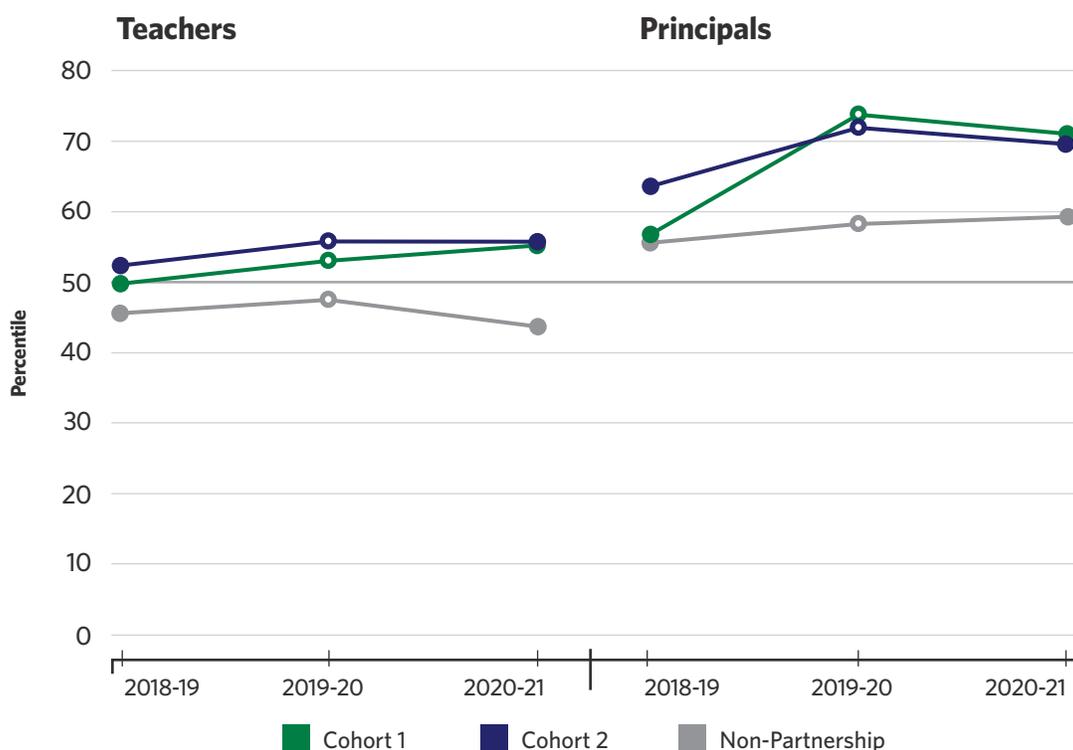
Note: Graphic shows the average academic focus percentiles for Cohort 1, Cohort 2, and non-Partnership educators over all three survey administrations. The 50th percentile represents the average respondent (teachers and principals) across all three survey waves. A mean response above the 50th percentile line indicates that a given group reported that their school had a greater academic focus than the average respondent, while a mean response below the 50th percentile line indicates that a given group reported less of an academic focus than the average respondent.

Together, these results suggest that Partnership school educators continued to focus on academics and assessments even as they grappled with a pandemic. The Hurricanes charter leader highlighted efforts to keep staff attentive to student growth and achievement:

> I'm not gonna sit here and say it's not tough to try to get them to focus on the things that we consider important. We're still working through that with some of them. Some do better than others. Some of the staff do better than others as to focusing and maintaining their focus. I've got one today that I had to have a meeting with and tell them, "Hey, you're behind on getting your lesson plans in. You have two weeks to get your lesson plans that aren't currently completed and get everything up to date by the—I gave him 'til the 15th to do that. There's things that you just—even though we're in the middle of a pandemic, we still have to focus on student achievement and student growth.

EDUCATORS WERE CONCERNED ABOUT BEING HELD ACCOUNTABLE FOR PANDEMIC-RELATED CHALLENGES

While educators felt their schools maintained academic focus during the pandemic, they reported concerns about school and personal accountability for failing to meet improvement goals. Educators expressed substantial concerns that they and their schools would be held responsible for COVID-19-related challenges such as disrupted learning during the pandemic and student absenteeism. Figure 7.5 shows the proportion of educators who reported major or primary concerns that they and their schools would be held responsible for disrupted learning during the pandemic. The left side of the figure shows concerns about the school's accountability for disrupted learning while the right side shows concerns about personal accountability. Approximately 70% of teachers and principals in Partnership districts reported being very concerned that their schools would be held responsible for disrupted learning and for the learning of students who did not attend school during the pandemic, respectively. A similar share of teachers reported concerns that they themselves would be held responsible for disrupted learning. While both principals and teachers reported concerns about school accountability, principals were less likely than teachers to cite concerns about personal accountability.

FIGURE 7.5. Educator Concerns About Accountability During COVID-19
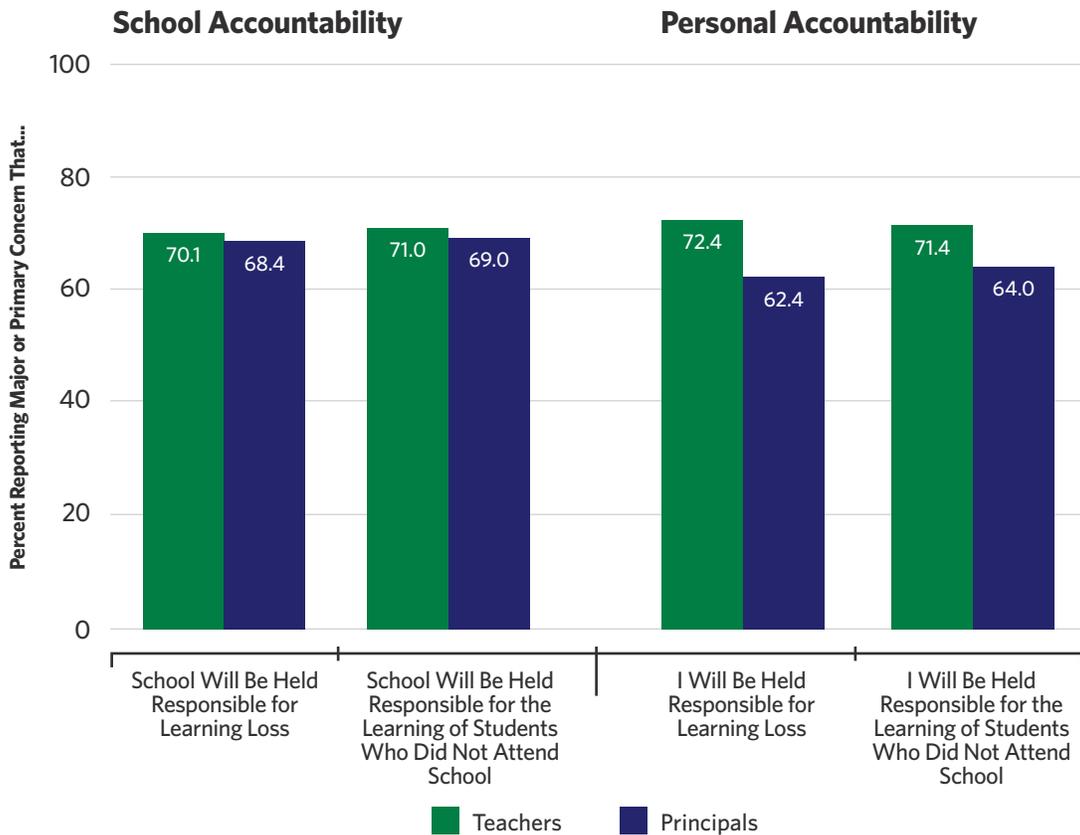
Note: Teachers and principals were asked about the extent to which they had concerns about the items above. Response options were "not a concern," "minimal concern," "moderate concern," "major concern," or "primary concern." Bars show the percent of educators who rated each item as a major or primary concern.

TPS Educators Reported More Accountability Concerns than Charter Educators During COVID-19

Figure 7.6 overviews the items represented by the accountability concerns construct, which captures educator concerns about accountability during the pandemic.

FIGURE 7.6. Accountability Concerns Construct

ACCOUNTABILITY CONCERNS
Educators were concerned about:

School accountability for disrupted learning

Personal accountability for disrupted learning

School accountability for absent students

Personal accountability for absent students

Figure 7.7 illustrates differences in accountability concerns between TPS and charter school educators. The left panel shows that TPS teachers were more concerned than charter teachers. The pattern is reversed for principals, with TPS principals reporting lesser accountability concerns than their charter school peers. This difference is driven by charter principals' worries about their school's accountability for disrupted student learning. Specifically, 77% of charter principals expressed that school accountability for disrupted learning was a major concern or above, compared with 68% of TPS principals. This may be because charter school leaders perceived a greater danger of closure or takeover given that their charter must be renewed at regular intervals. For example, the Sabres district leader shared, *"They don't close traditional schools, or if they do, it's under some guise of the fact that enrollment has shifted, blah, blah, blah. They will close a charter school."*

There are a few possible mechanisms that may account for the differences in accountability concerns between TPS and charter teachers. The first, which we also discuss in Special Section B, is information asymmetry. Because charter school leaders are often leaders both in the school building and in the administration office, they may have more direct access to information than TPS principals. Teachers whose principals are closer to the top of the information chain may have fewer barriers to information. To the extent that district and school leaders received positive feedback on their RGAs and understood the evolving nature of the Partnership Model as a supportive rather than proscriptive intervention, charter teachers with more direct access to that information may have felt fewer accountability pressures even as charter leaders retained school-level concerns.

FIGURE 7.7. Educator Concerns About Accountability by School Governance Type
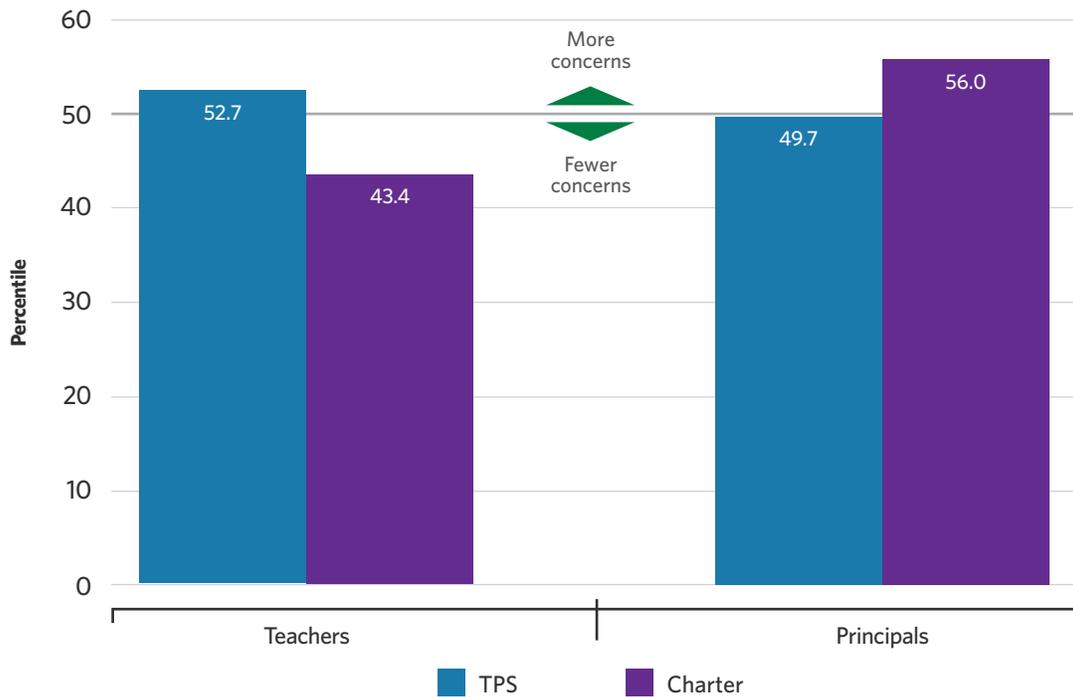
Note: Bars show the average percentile of the accountability concerns for teachers and principals in the 2020-21 school year. The 50th percentile represents the average respondent (teachers and principals). A mean response above the 50th percentile line indicates that a given group reported that their school had greater concerns than the average respondent, while a mean response below the 50th percentile line indicates that a given group reported fewer concerns than the average respondent.

A second mechanism could be the different pressures charter school educators feel compared with TPS educators. While the threat of closure may be higher for charter schools, TPS educators may have less autonomy to implement school improvement interventions or changes at the school or classroom level. Finally, there may be differences between the student populations in TPSs and charter schools that might increase educator concerns over accountability.

Uncertainty About Accountability Exams in the 2020-21 School Year Stoked Educator Accountability Concerns

The U.S. Department of Education denied K-12 standardized testing waivers to several states, including Michigan, on February 22, 2021. The Department then approved Michigan's proposal to waive accountability requirements for the 2020-21 school year in late March. In practice, these determinations mean that Michigan was required to administer state accountability tests in spring 2021, but students who were virtual for the school year would not have to participate and any resulting scores would not be used to rank schools under federal policy or make federal accountability decisions (Higgins, 2021). While state participation rates ranged from 64-72% depending on grade and subject, Partnership districts in particular may have seen lower participation due to their high rates of remote instruction.[1] To that end, uncertainties around accountability during COVID-19 may have been especially salient in Partnership schools and districts because lower participation rates contribute to less generalizable school- and district-level scores.

Because the 2020-21 Partnership survey was administered in the early spring of 2021, it was not clear at the time of survey administration whether Michigan would be offering the M-STEP and how, if at all, districts would be held accountable for the results. The U.S. Department of Education denied Michigan's assessment waiver three weeks into our survey administration and did not provide guidance on accountability requirements until after the survey was closed. Beyond our own survey timeline, the overall uncertainty about accountability and testing throughout the year may have added a layer of instability to an already erratic and unpredictable school year. Additionally, the state A-F accountability system, which was introduced as part of Public Act 601 of 2018, remained in place. The A-F system assigns letter grades to schools based on their proficiency, growth, graduation rates, English learner progress, and proficiency relative to schools with similar characteristics.

To understand the extent to which these uncertainties may have affected educator perceptions, we asked teachers and principals how concerned they were about how student learning would be measured at the end of the 2020-21 school year. Figure 7.8 shows the proportions of teachers and principals in Partnership districts who reported that the ways in which student learning would be measured was a major or primary concern. We highlight three findings. First, overall, approximately three-quarters of teachers and principals reported that the way student learning would be measured was a major or primary concern.

FIGURE 7.8. Educator Concerns About How Learning Will Be Measured
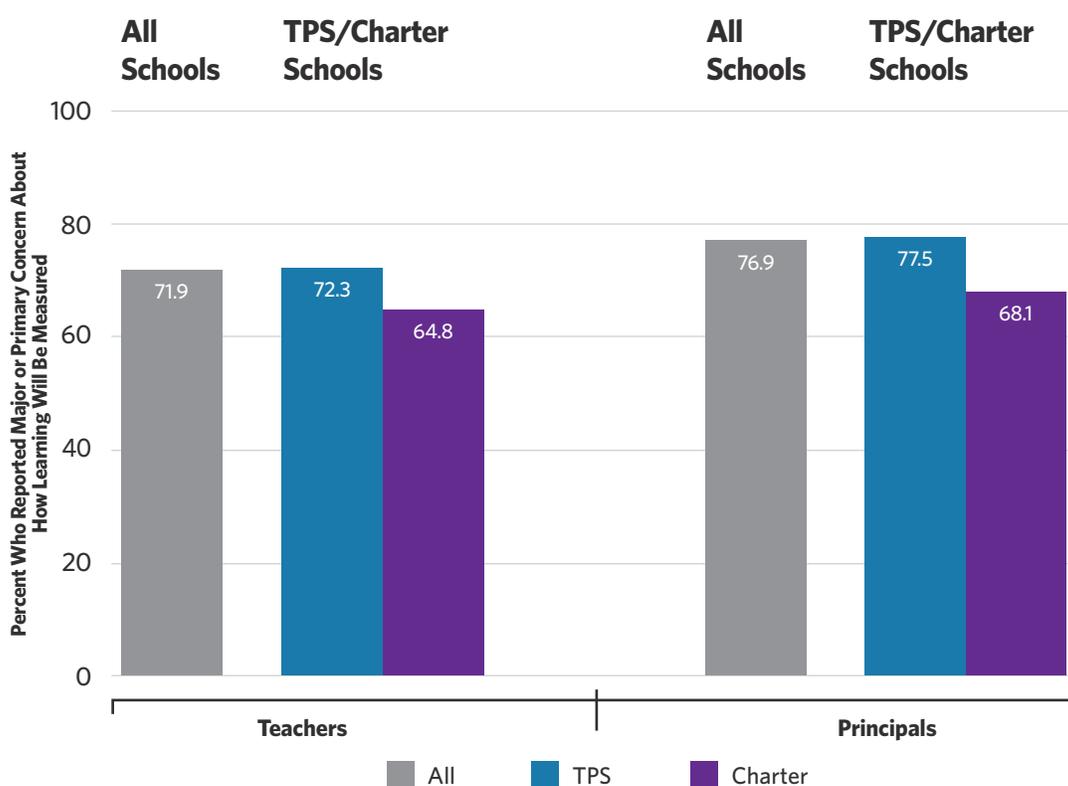
Note: Teachers and principals were asked about the extent to which they had concerns about the items above. Response options were "not a concern," "minimal concern," "moderate concern," "major concern," or "primary concern." Bars show the percent of educators who believed that how student learning will be measured was a major or primary concern.

Second, while teachers reported more concerns related to accountability for student learning during the pandemic, principals were five percentage points more likely than teachers to report being concerned about how student learning would be measured. Together, these findings suggest that principals may be slightly more concerned about the details and logistics of measuring school accountability than teachers, but teachers are more concerned about the outcomes of accountability. Third, TPS educators were more concerned than were charter school educators. These TPS-charter differences results mirror the findings on accountability monitoring and concerns described above.

PARTNERSHIP EDUCATORS FOUND THE RGA PROCESS TO BE FAIR, USEFUL, AND TRANSPARENT

As part of the Partnership Model, each district is evaluated on progress towards their Partnership goals at 18 and 36 months of Partnership implementation. This process is called the Review of Goal Attainment (RGA). Representatives from the district, MDE, the district's ISD, and community partners invited by the district meet to evaluate the district's progress toward their 18-month goals and determine additional supports required to meet the 36-month goals. Figure 7.9 provides principal perceptions of the RGA process. The majority of principals reported that they were involved in the RGA process and that the process was fair, useful, and transparent. Nearly half reported that the RGA process allowed honest conversations about strengths and weaknesses and 52% said that it provided helpful feedback.

FIGURE 7.9. Principal Perceptions of RGA Process
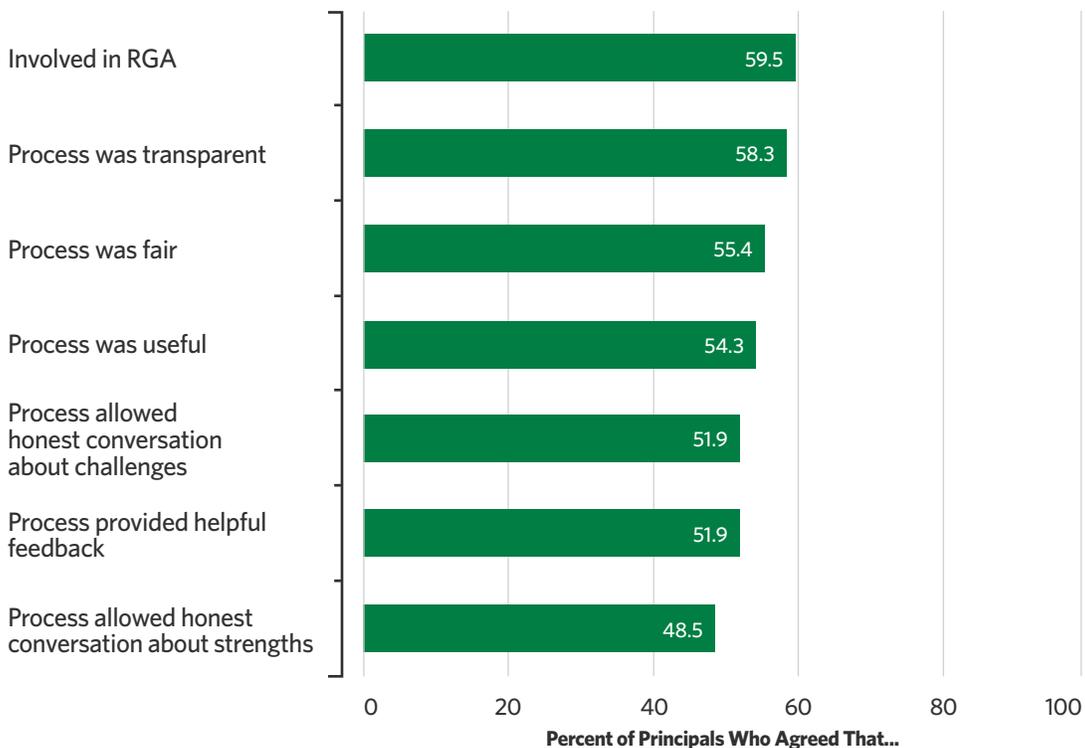
Note: Principals were asked about the extent to which they agreed with items related to the RGA process in their school. Response options were "strongly disagree," "disagree," "neither agree nor disagree," "agree," or "strongly agree." Bars show the percent of principals who agreed or strongly agreed.

As of the administration of the 2020-21 survey, 35 18-month RGAs had been completed including all of the districts currently in Partnership and some districts that were previously identified as Partnership but have since exited or closed. Districts largely received positive feedback from the 18-month RGA meetings. Out of 35 RGAs, 22 districts received a result of "On Track" on their 18-month benchmark goals. Although not shown here, Partnership school principals reported more positive perceptions than non-Partnership school principals and charter school principals reported more positive perceptions than TPS principals. It may be the case that Partnership school principals in particular were more involved in the RGA process than their district colleagues in non-Partnership schools. Because charter principals are often also district leaders, they may have had more direct knowledge and ownership of the RGA process than TPS principals.

SUMMARY

The COVID-19 pandemic affected many aspects of education in Partnership districts and accountability was no exception. Teachers and principals reported that their schools continued to monitor improvement goals but cited challenges related to the monitoring process. Even during the pandemic, educators expressed that their schools remained focused on academics— more so in Partnership schools than in non-Partnership schools. While schools maintained a focus on improvement goals, educators were concerned about accountability for those goals—in particular with respect to disrupted learning, the learning of students who did not attend during the pandemic, and how student learning would be measured in the 2020-21 school year. Teachers were more concerned with personal and school responsibility for disrupted learning and principals were more concerned about the logistics of how learning would be measured.

All Partnership districts had undergone the RGA process, and many had received positive feedback. A majority of principals felt that the process was helpful and fair, with charter school principals reporting more participation in the process than TPS principals.

At the time of writing, questions about the accountability during COVID-19 remained, though there was more certainty around the role of exams for federal accountability than at the time of survey administration. The state was required to administer exams, but scores will not be used for federal accountability. However, the state still planned to assign letter grades to schools under the state accountability system—though it was unclear how these letter grades would be used.

By summer of 2021, OPD had leaned in further to Partnership as a supportive intervention, providing Cohort 1 districts with the option to remain in Partnership for an additional year or to exit. All Cohort 1 districts that remained open in the 2021-22 school year elected to continue receiving Partnership supports and 21h funds. These decisions on the part of the state and districts further cemented Partnership as an intervention focused more on supports than sanctions, reflecting school turnaround policy across the country.

SECTION SEVEN NOTES

1. At the time of writing, we did not yet have access to school- or district-level data to calculate Partnership-specific participation rates.
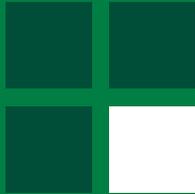
Special Section B:
Perceptions of Partnership

The majority of Partnership leaders (11 of 18) had positive perceptions of the Partnership Model. As in past years, leaders highlighted the following as benefits of Partnership: support from ISDs, 21h funding, the flexibility of the policy in contrast to past turnaround reforms, and the opportunity to review, identify, and refine their school improvement approaches. A subset of leaders began to question whether some of the positive changes could be sustained once additional funding is gone.

In this section, we talk about district leader, principal, and teacher perceptions of Partnership. We first discuss the perceptions from district leader interviews. Next, we bring in data from the 2020-21 survey to describe perceptions of Partnership over time from principals and teachers. Finally, we discuss the future of Partnership resources from the point of view of district leaders.

LEADERS EXPRESSED POSITIVE VIEWS OF FINANCIAL AND TECHNICAL SUPPORTS

By and large, leaders continued to express positive perceptions of MDE and ISD supports. The following quote from the district leader of Oilers reflected this general sentiment:

It's given us resources and communications with the [state] Department of Education, not only through our liaison, but through when we did have the face-to-face kinds of meetings that [PAL] held. We were able to do workshops together and focus on areas. It's increased our, like I said, our participation and relationship with [ISD]. It's been very supportive and good for us.

The Oilers district leader even admitted, *"I hate to say it, but it's been a good one"* as a preface to a response about how they felt about the Partnership Model. The superintendent of Rangers, like others, said of 21h, *"21h funds are always very helpful. We never want them to go away."* The district leader of Jets added that 21h helped them *"put things in place to support [us] in our goals."*

Principals echoed those perceptions in survey responses, with 54% of principals across Partnership districts rating ISD supports as high quality (almost all of the remainder rated these supports as moderate quality) and 43% rating MDE supports as high quality (another 44% rated these supports as moderate quality). Principal perceptions of ISD and MDE supports in Partnership schools were even more positive, with 68% rating ISD supports and 55% rating MDE supports as high quality.

Leaders Perceived Partnership in a More Positive Light Than Prior Turnaround Initiatives

Several leaders contrasted the current policy with past turnaround policies to illustrate why they perceived Partnership in a more positive light. For example, the charter leader of Lightning said that Partnership is not just about accountability, but offers support and is therefore more positive, *"I just think the term 'partnership,' it has allowed us, when you talk about the evolution, it starts off on a positive note as opposed to starting off with a School Improvement Grant or it's a turnaround."* This idea that Partnership starts with a "positive note" echoed findings from past reports in which supports were provided and relationships created to help districts meet their goals, something that district and charter leaders felt was a necessary complement to increased accountability.

Partnership Provided Opportunities for Reflection and Planning

In the process of explaining why Partnership was a positive experience, some superintendents explained that the process was helpful and forced them to be reflective about what they wanted to do and why. As the charter leader of Wild explained:

We had some things in place … before we were in the Partnership Agreement, so I felt like that really helped with the momentum, more of a deep dive as far as our policies and things that we had in place academically, systemically, and just organizationally. Taking that deep dive really turning over every stone and seeing where we're at, and really being forced to do so, but taking a positive approach, as well.

As we described in detail in the Year Two Report, this quote illustrates how some used this opportunity to take a "deep dive" into their systems, which helped some leaders reflect on and subsequently refine their approaches.

BUILDING-LEVEL EDUCATORS EXPRESSED HIGH LEVELS OF GOAL AWARENESS AND BUY-IN

In addition to buy-in from district leaders, another important component of successful turnaround is awareness and buy-in at the school level. Survey data show that principals and teachers had high awareness of improvement goals and positive perceptions of Partnership. Figure B.1 provides the share of teachers and principals who said they were aware of and understood their schools' and districts' improvement goals in 2020-21, highlighting three findings. First, across Partnership districts, a large share of both teachers and principals reported that they were aware of and understood their goals. Second, educators in Partnership schools reported slightly greater goal awareness. Finally, principals reported higher awareness than teachers.

FIGURE B.1. Awareness and Understanding of Improvement Goals by Partnership Status
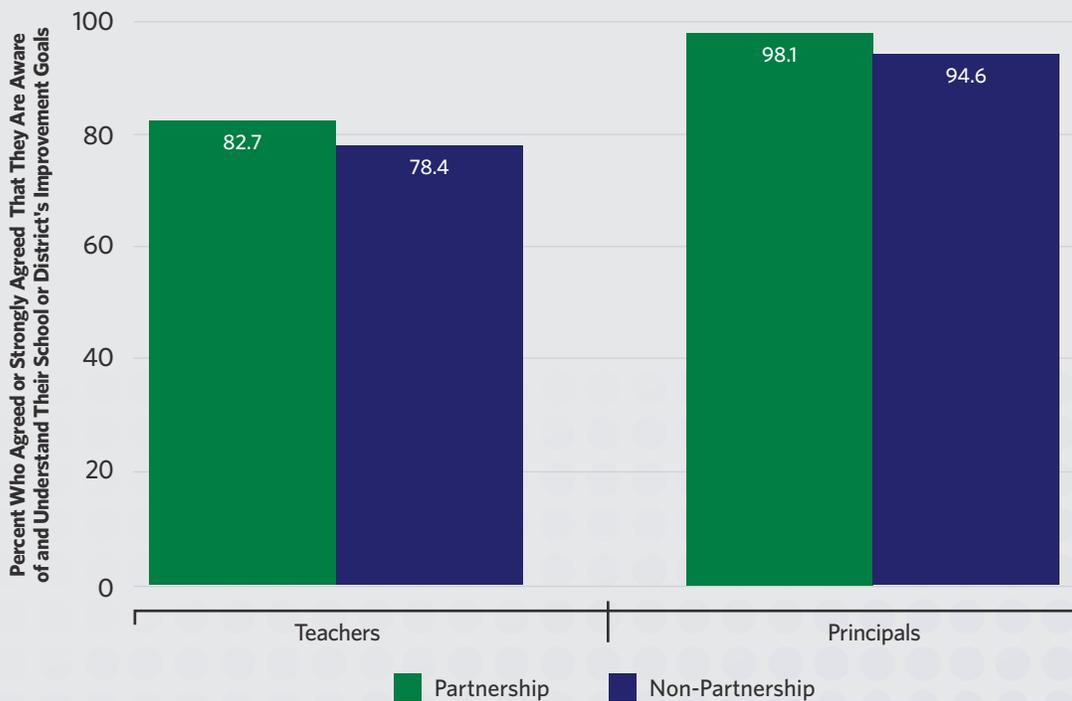
Note: Educators were asked about the extent to which they agreed that they were aware of and understood their improvement goals. Response options were "strongly disagree," "disagree," "neither agree nor disagree," "agree," or "strongly agree." Graphic shows the percent of educators that agree or strongly agree that they are aware of and understand their schools' and districts' improvement goals. Bars represent the responses to the 2020-21 survey by teachers (left) and principals (right).

Awareness of and Buy-In to Goals Increased Over Time

To unpack how awareness and buy-in changed over time and differed across cohorts and non-Partnership schools in Partnership districts, we developed a construct representing educator awareness and buy-in, as Figure B.2 shows.

FIGURE B.2. Awareness of and Buy-in to Improvement Goals Construct

AWARENESS OF AND BUY-IN TO IMPROVEMENT GOALS

Agree with statements:

Aware of and understand goals, goals are feasible, goals focus on important issues, goals help students, we have resources we need, clear and concrete steps, efforts align with goals.
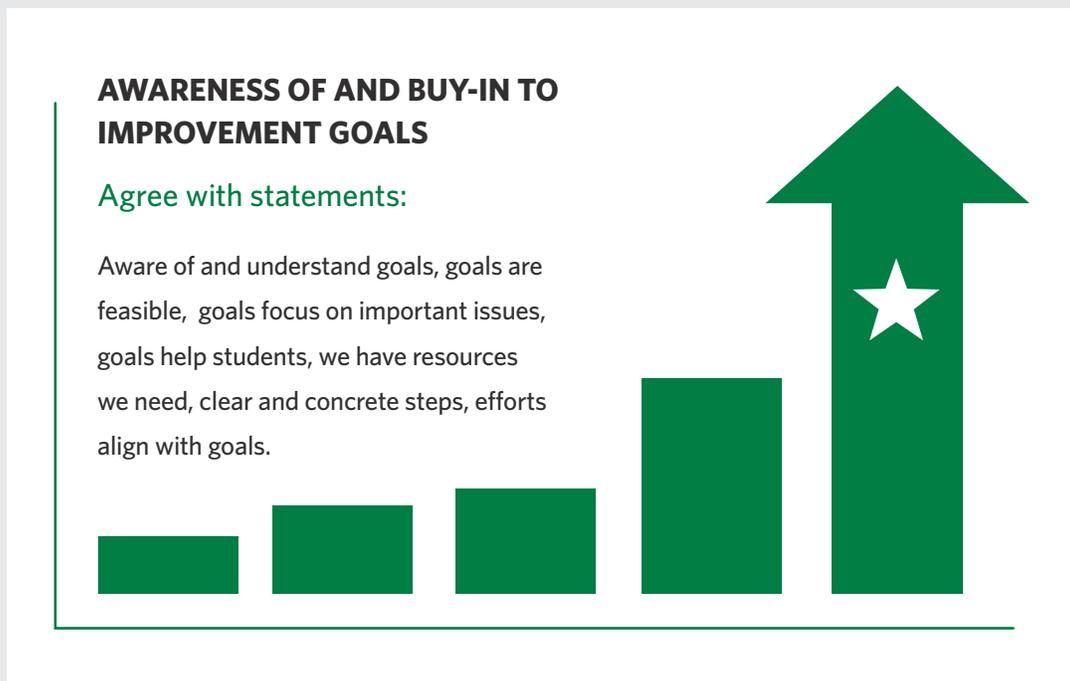
Figure B.3 provides the average level of awareness and buy-in for each cohort of Partnership educators and non-Partnership school educators by survey year and educator type, pointing to three broad takeaways. First, across all three years and all three groups, there was greater awareness of and buy-in to school improvement goals among principals than among teachers. Second, awareness and buy-in increased over time for educators in both Partnership and non-Partnership schools. Third, educators in Partnership schools were not substantially more aware of their goals than educators in non-Partnership schools in Partnership districts.

The increasing awareness reported by Cohort 2 educators over the three years alongside Cohort 1's stable understanding of the Model in the first two years of study suggest that it takes several years to build educator understanding and buy-in to an intervention like Partnership. In particular, if turnaround district leaders have maintained more consistent contact with MDE and OPD than building-level educators, principals have less exposure, and teachers have relatively little interaction with MDE and OPD, then information about and awareness of the reform could take time to permeate schools and classrooms.

FIGURE B.3. Awareness of and Buy-in to Improvement Goals

Teachers

Principals

Year	Teachers Cohort 1	Teachers Cohort 2	Teachers Non-Partnership	Principals Cohort 1	Principals Cohort 2	Principals Non-Partnership
2018-19	47.1	43.1	47.9	60.9	50.6	59.9
2019-20	47.9	50.2	48.3	58.8	69.8	55.1
2020-21	58.7	57.9	53.7	81.6	70.5	76.8

Teachers axis: 100 · 75 · 50 · 25 · 0

Principals axis: 0 · 25 · 50 · 75 · 100

More awareness and buy-in ◄ ► Less awareness and buy-in

More awareness and buy-in ◄ ► Less awareness and buy-in

Legend:
- Cohort 1
- Cohort 2
- Non-Partnership

Note: Graphic shows the awareness of and buy-in to improvement goals over all three survey administrations. The first panel shows the average percentile of teachers by year and Partnership status and the second panel shows principals in the same groups. Values above the 50th percentile line indicate higher levels of awareness and buy-in than the average educator across all three survey waves. Values below the 50th percentile line indicate lower levels of awareness and buy-in.

The jump in goal awareness in the 2020-21 survey might in part be related to the COVID-19 pandemic. OPD was very involved during the pandemic to provide support to Partnership districts specifically. Messaging around high-stakes accountability being canceled for the 2019-20 school year and the uncertainty around accountability for the 2020-21 school year may have also brought Partnership into educators' minds.

Figure B.4 compares TPS and charter teacher and principal responses in the 2020-21 school year. We find that charter educators reported substantially greater buy-in and understanding than their colleagues in traditional public schools.

The TPS and charter results follow a similar pattern to those in the Year Two Report, which showed that that charter school leaders were more likely to include their teachers in Partnership activities and explicitly involve them in discussions about accountability and

goal setting. Additionally, due to governance structure differences between TPS and charter schools, charter school leaders are often both school and central office administrators, while TPS principals are more removed from central administration. As a result, charter leaders may have more direct access to information about Partnership, goals, and accountability provisions than do TPS principals. With charter leaders in central administration, charter teachers would be more proximate in the chain of information than their peers in traditional public schools. This dynamic suggests the potential for information asymmetry between different groups of educators, as principals and charter educators have more access to information than do teachers and TPS educators, respectively.

FIGURE B.4. Educator Awareness of and Buy-in to Improvement Goals by School Type
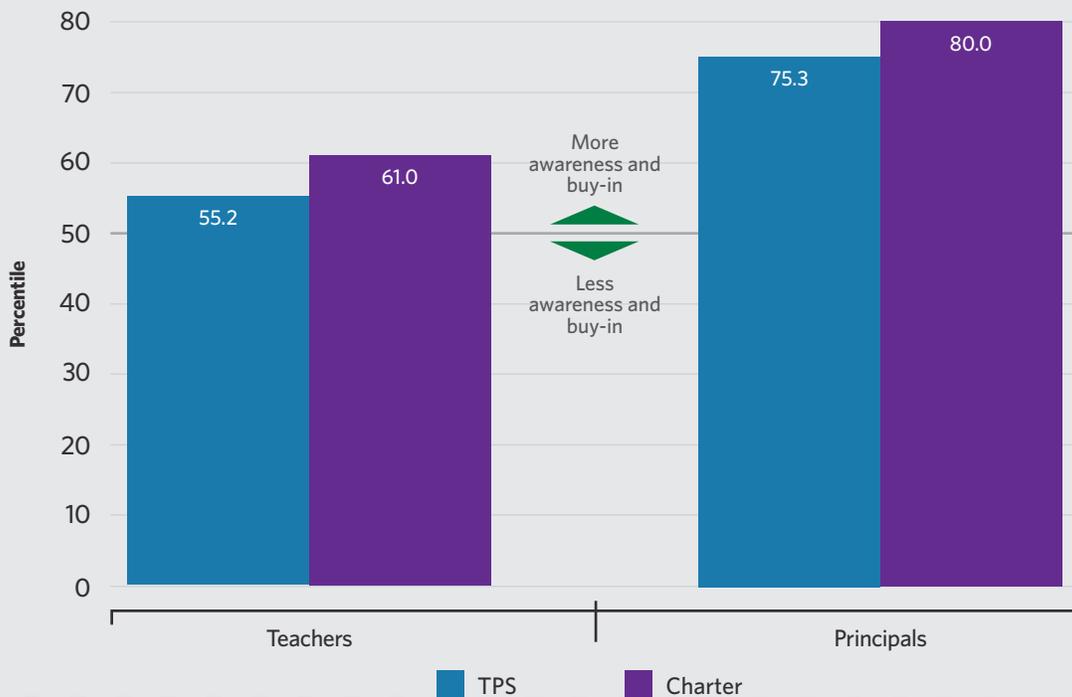
Note: Graphic shows the average awareness of and buy-in to accountability goals reported by 2020-21 survey respondents. Values above the 50th percentile line indicate higher levels of awareness and buy-in than the average educator across all three survey waves. Values below the 50th percentile line indicate lower levels of awareness and buy-in.

Educators Believed Goals Would Improve Student Outcomes and Meet Student Needs, But They Lacked the Resources To Achieve Them

Figure B.5 shows the percentage of educators who chose agree or strongly agree with statements on three survey items related to improvement goals. The first two sets of bars show that the far majority of educators believe that school improvement goals will help improve student outcomes and meet student needs. As is generally the case, principals

are more enthusiastic than teachers. However, far fewer educators agree that schools have the resources necessary to achieve their stated goals. These results are similar to those reported in previous years.

FIGURE B.5. Educator Beliefs About Improvement Goals
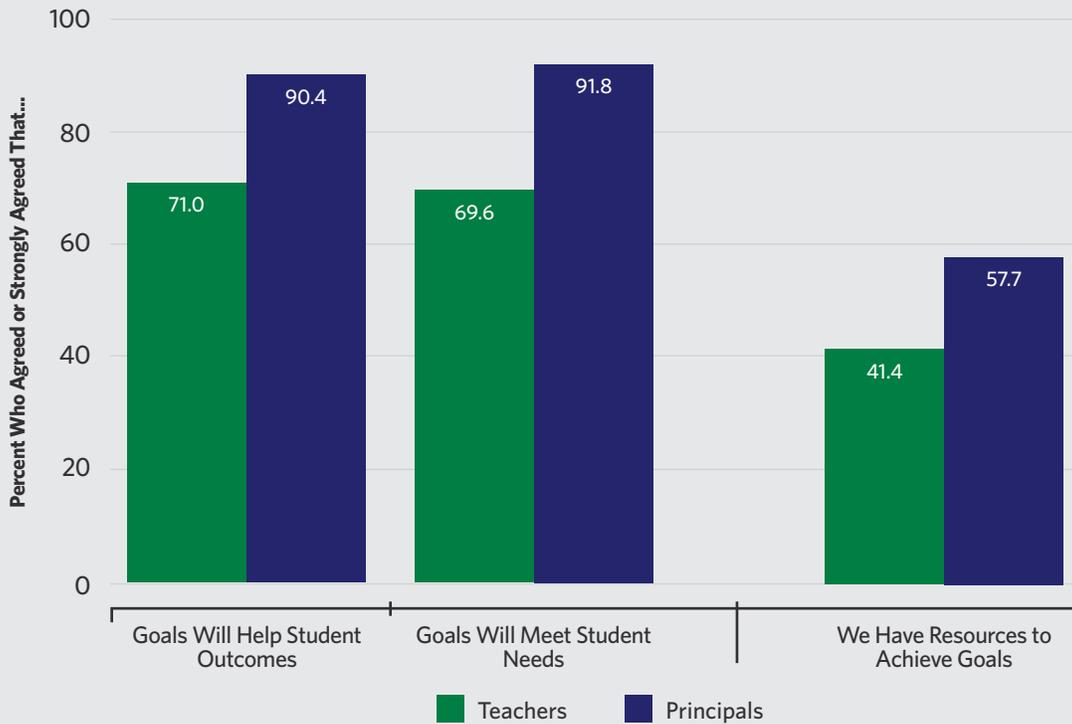
Note: Teachers and principals were asked the extent to which they agreed with a series of statements about their school or district's improvement goals. Response options were "strongly disagree," "disagree," "neither agree nor disagree," "agree", or "strongly agree." Bars show the percent of educators who agreed or strongly agreed.

LEADERS HAD CONCERNS ABOUT THE CULMINATION OF PARTNERSHIP SUPPORTS

As Partnership was nearing its three-year conclusion, a central concern for some leaders was whether some of the changes could be sustained, particularly if they were relying on the additional funds for staffing or newly created roles. While we conducted interviews in winter 2021, this finding may elucidate one reason why Cohort 1 Partnership leaders in summer 2021 elected to remain in Partnership for a fourth year. The charter leader of Kings explained it this way:

> ...So now I put all these programs and people in place, and then now the funding's gone, and there hasn't been a thorough analysis of if my budget can support these positions and—so what do my enrollment numbers need to be to support those roles as well? Now, if I grow—any person dealing with a

low-performing school will tell you that, if you add 100 kids into the mix, that completely changes your culture, your academic achievement. It's a lot that goes into adding that many students into a school. Over a year would be ridic- ulous. Over three years, it would be challenging. If you're a school that already has a lot of significant challenges, it adds more—it puts more on you [to] manage per se. From a financial standpoint, you have to be able to sustain.

This example illustrates a possible tradeoff for those wanting to continue staffing positions they added to help them meet their Partnership goals: adding a significant number of new students to increase enrollment has the potential to adversely affect a Partnership school's culture. However, it is important to note that these concerns were voiced before the announcement of the new SY 2021-22 budget and American Rescue Plan Elementary and Secondary School Emergency Relief (ARP-ESSER) funds. While this new funding will likely help to address some of the Partnership leaders' concerns expressed here, it is also likely that their concerns will reemerge as the new dollars are time-limited.

SUMMARY

Overall, the majority of Partnership leaders voiced optimism about the Partnership policy. Principals and teachers expressed high levels of awareness and buy-in to improvement goals, but were less optimistic than district leaders that they had the resources they needed to accomplish the goals. In keeping with prior reports, Partnership leaders found the additional funding, strategic planning, and technical assistance from MDE and ISDs useful. Finally, they hoped some of these supports (particularly funding) from the state and MDE would continue even after successfully exiting the Partnership Agreement.

SECTION EIGHT:
SCHOOL CLIMATE AND CULTURE

EPIC

**Education Policy
Innovation Collaborative**
RESEARCH WITH CONSEQUENCE

Section Eight:
School Climate and Culture

"Our teachers— they've been through it. When I say they've been through it, it's been brutally challenging for them. You have teachers who chose a profession because they love being with kids and the interaction with the kids is a part of what keeps them motivated and thriving and energized. They've relied on each other a lot, right? They're a close staff. They get along really well. Most of them, well, they all do. Back over the years, there were some conflicts, but this year I have to say, I don't think anyone has a conflict that I know of. They rely on each other and they're so hard on themselves."

—Oilers District Leader

We highlighted in the Year Two Report that educators believed that positive school climate and culture was foundational to school improvement efforts. These perceptions align with research suggesting that a coherent and clearly communicated sense of school culture is an important factor for successful turnaround (Peurach & Glazer, 2012; Peurach & Neumerski, 2015), and that school climate and culture are mechanisms for school improvement (Bulach & Malone, 1994; Cohen, 2006; Dellar, 1998; Peurach & Neumerski, 2015; Thapa et al., 2013). School climate and culture also shape teacher working conditions, a critical lever for developing, recruiting, and retaining effective teachers (Johnson et al., 2005; Viano et al., 2020).

Before examining climate and culture in Partnership districts, it may be useful to define these terms—especially in the context of the COVID-19 pandemic when schooling moved outside the walls of the school buildings. Broadly, climate refers to the school environmental factors that affect the experience and behavior of educators, students, and other stakeholders. School climate is often characterized as shared educator perceptions of these factors. School culture is a related concept that reflects the values and character of the school as an organization. Culture can be reflected in educator shared assumptions about their schools' values and norms (Hoy, 1990). Our

focus in this section is largely on climate because we have rich data on teacher perceptions of school environment. Meanwhile, data from district leader interviews can provide some insights into school and district culture in Partnership districts.

In a typical school year, topics related to school climate include perceptions of safety, student behavior, the school's ability to meet students' academic and socioemotional needs, teacher-student rapport, high expectations, relational trust, and student enthusiasm to learn. In the Year Two Report, we showed that Partnership school educators reported a more challenging culture and climate than educators in non-Partnership schools and reported that their schools were increasing their focus on issues related to culture and climate.

This year, we build on the Year Two Report by focusing on school climate factors that remained salient to educators even under remote instruction. For example, while previous surveys asked educators about factors related to school safety, behavioral standards and enforcement, and fights, the 2020-21 survey did not ask teachers about these items because at the time of survey administration, Partnership districts had largely been operating remotely for most or all of the school year.[1] We therefore asked teachers about the school's ability to meet student socioemotional and academic needs, teacher rapport with students, teacher expectations for students, student enthusiasm to learn (modified from previous surveys in which we asked about enthusiasm to come to school), teacher ability to engage students in learning, and shared beliefs about the school's central mission. The literature on school turnaround has highlighted a shared understanding of goals and mission as a key dimension of school culture in successful school improvement (Peurach & Neumerski, 2015).

In the remainder of this section, we describe educator perceptions of climate and culture. We then delve more deeply into student motivation and parent engagement, two elements of climate that were especially salient during the pandemic. Next, we turn to school focus on climate and culture and the extent to which it changed over time.

EDUCATORS PERCEIVED SIMILARLY POSITIVE CLIMATE AND CULTURE DURING THE PANDEMIC

The COVID-19 pandemic may have assuaged some challenges related to school climate and culture while potentially intensifying others. For example, teachers who struggled with managing student behavior in a typical classroom setting—a challenge that several Partnership leaders highlighted in the Year Two Report—were no longer managing a physical classroom. On the other hand, teachers' jobs became more demanding in other ways as they worked to adapt their lessons to a new learning format, and, in some cases, to balance online and in-person instruction. As we describe in Section Nine, some educators struggled with demoralization and burnout. Many teachers struggled to build connections with students during virtual instruction (see Section Three).

Figure 8.1 provides the share of Partnership district educators who agreed or strongly agreed with statements about climate and culture in the 2020-21 school year. There are three takeaways. First, approximately 8 in 10 teachers agreed that teachers in their school had high expectations and a strong rapport with students, respectively. These findings during a pandemic while most

or all schooling was remote underscores the considerable efforts educators were making toward supporting their students. For example, one teacher survey respondent wrote, *"The staff I work with has been tremendous in overcoming so many challenges. We work hard every day thinking out of the box in ways to connect with students and get them excited about learning."*

Second, while teachers believed they had high expectations and strong rapport with students, only about half of teachers said their school was doing a great job meeting students' academic and socioemotional needs. This divide highlights the breadth and scope of the challenges facing educators and students in Partnership districts. Even as teachers were maintaining high expectations and building rapport with students, many believed these efforts were insufficient to meet students' needs.

Finally, with few exceptions, principals were more likely than teachers to agree that their school had positive school climate and culture features.

FIGURE 8.1. Partnership District Educator Perceptions of School Climate and Culture
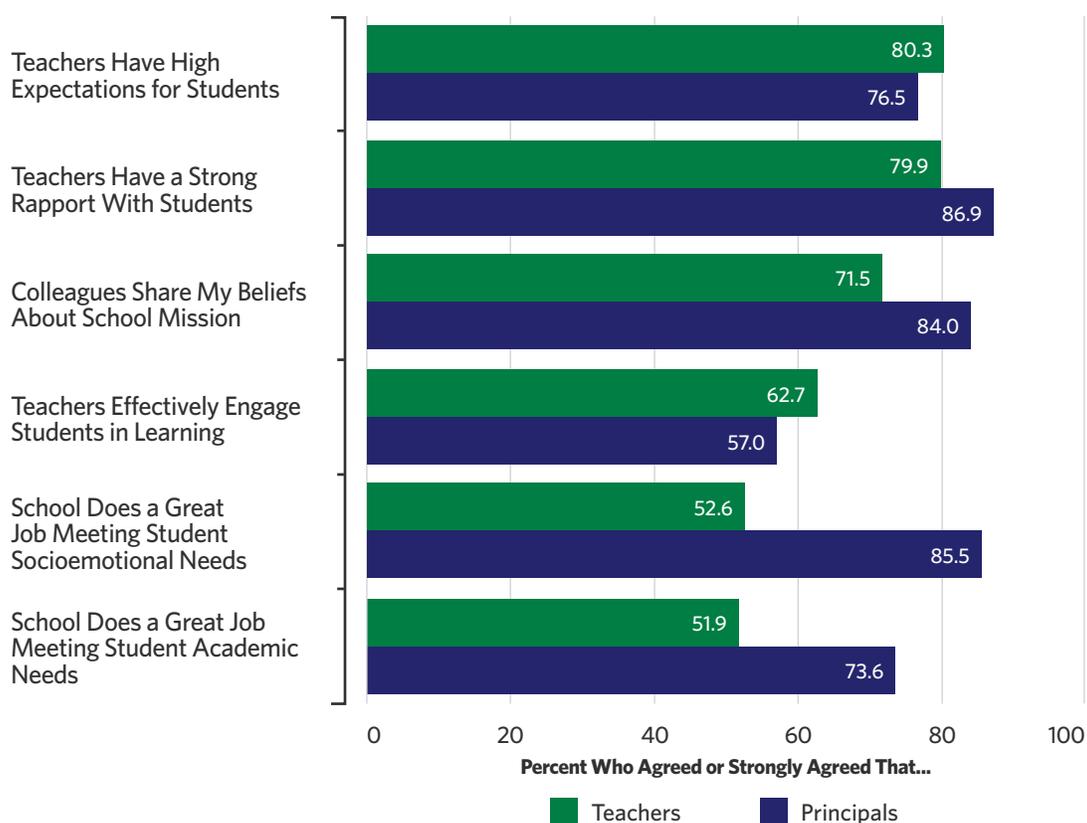
Note: Educators were asked the extent to which they agreed with each statement related to climate and culture. Response options were "strongly agree," "agree," "neither agree nor disagree," "disagree," and "strongly disagree." Percentages represent the share of educators in Partnership districts who agreed or strongly agreed. Items sorted by frequency of teacher responses.

FIGURE 8.2. Positive Climate and Culture Construct

POSITIVE CLIMATE AND CULTURE

Agree with statements:

School meets students' academic needs — **1**

Teachers have strong rapport with students — **2**

Teachers have high expectations — **3**

Students are enthusiastic to come to school/learn — **4**
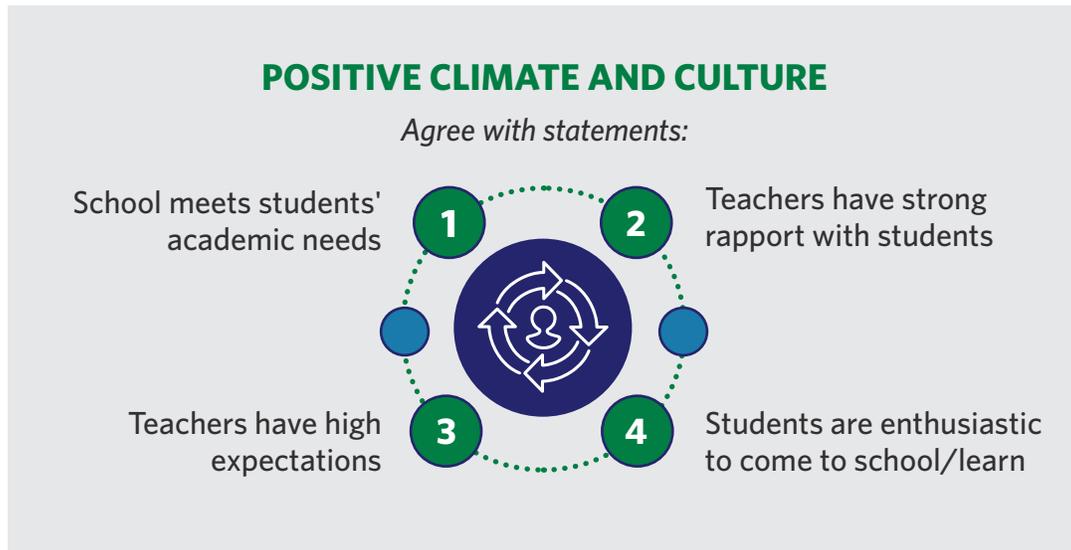
Drawing from questions asked in all three years of the survey, we examine climate and culture over time for Cohort 1, Cohort 2, and non-Partnership schools in Partnership districts.[2] Figure 8.2 summarizes the items included in the construct representing positive climate and culture, and Figure 8.3 shows the change over time on climate and culture for each of the three groups, with teachers in the first panel and principals in the second. We highlight that this climate and culture measure is necessarily restrictive due to the limited questions asked in 2020-21. While it may be the case that elements of culture and climate specific to in-person schooling—such as safety and facilities—changed over time, we can speak only to the elements of climate and culture described here. The green lines in both panels show that after a dip in 2019-20, perceptions of climate and culture rebounded among Cohort 1 teachers and principals in the 2020-21 school year. Perceptions of climate and culture among Cohort 2 teachers increased slightly over the three years while remaining stable in non-Partnership schools.

We consider several possibilities to explain the increasing or stable perceptions of climate and culture even during the pandemic. First, survey results find that educators perceived fewer challenges related to student behavior. Specifically, educators said they were significantly less focused on behavioral interventions than in prior years and would not benefit as much from support with behavioral interventions.[3] This may be because, as we highlighted above, remote instruction afforded some teachers more control over behavioral management. Alternately, it may be that students who had presented particular behavioral challenges for teachers in person simply did not attend, or did not engage in, remote schooling. For example, one teacher shared, "*I have LOVED teaching remotely. I have as much or more connection to the students virtually, but only the ones who show up.*" They went on to note:

> *I have had no behavioral problems virtually. When we were in person, I was getting*
> *very worn out with the behavior problems. I have really begun to realize how*
> *emotionally abused I was by the students who behave poorly. It was just a few*
> *students, but it was constant. I don't deserve that and there is no recourse. Students*

who are poorly behaved towards the teacher are talked to, and simply return to class and continue the behavior and encourage other students to behave poorly. This is so disruptive to the learning process and is never addressed.

FIGURE 8.3. Educator Perceptions of School Climate and Culture Over Time by Cohort and Partnership School Status
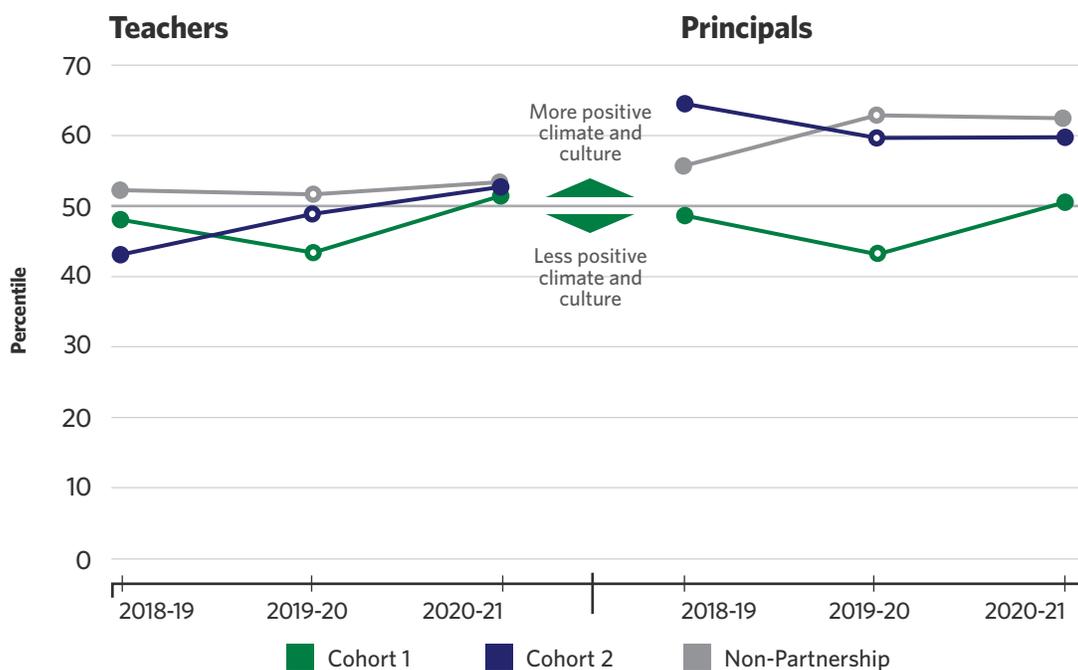
Note: Marker heights represent mean percentiles of Cohort 1, Cohort 2, and non-Partnership school educators on responses to items related to school climate and culture asked in all three survey waves. The 50th percentile represents the average for all teachers and principals across each of the three survey waves. A mean response above the 50th percentile line indicates that a given group reported more positive school climate and culture than the average respondent across the three survey waves. A mean response below the 50th percentile line indicates that a given group reported a more negative climate and culture.

Several superintendents also said that there were fewer challenges with student behavior in a virtual environment specifically. The district leader of Jets explained that teachers had fewer issues with classroom management in a virtual environment: *"With Zoom, our behavior, our discipline referrals are drastically down, so behavior has been easier."* The charter leader of Wild also noted that *"student behavior [problems] has been lessened."* The district leader of Devils hypothesized that this situation made it easier for some teachers and students to focus on instruction:

We have found that some kids do better in online learning than they do in the classroom. There's two different ways to look at it. One is the kids who might cause problems, don't have anybody to cause problems with, so they're able to learn. They're not causing trouble... Also, some of the kids who are so negatively affected by some of the behaviors are able to just get their learning and do their work, and they're happy, and they do well.

Second, as we address more in Section Nine, the pandemic may have led educators to feel more supported by their administrators, especially to the extent that district and charter leaders saw themselves as cheerleaders for their staff. One teacher noted that their principal support trickled down to staff and students as well, thus contributing to positive climate and culture:

> [Principal], our principal, is amazing. She supports the staff 100%, which makes it easier for the staff to support our students. The climate and culture at [High School] is positive and we are doing our best to serve the needs of our students during the pandemic, both virtually and in-person.

Third, it is possible that teachers and principals also saw themselves as cheerleaders, as suggested in the quote above. These positive perceptions may reflect educator and student resilience in the face of a challenging learning environment—especially as their students grappled with family member illness, new responsibilities, and economic uncertainties. We showed in Section Three that these challenges were especially striking for Cohort 1 students. To that end, Cohort 1 educators may have felt the "cheerleader" role as especially important in supporting their students to cope with the pandemic, potentially leading to the increase in perceptions of culture and climate exhibited by Cohort 1 educators in Figure 8.2.

Finally, it is possible that investments in climate and culture in the first years of Partnership better equipped Partnership schools and districts to maintain climate and culture even during a pandemic. For example, one teacher wrote:

> ...I love my principal and our school mission. There has been great improvement since my first year here and I feel that the staff is better aligned with the goal of serving our students. The culture and climate has improved even virtually.

Notably, we do not find differences in perceptions of climate and culture between Partnership and non-Partnership schools, suggesting that any such gains may have occurred at the district level.

TEACHERS AND PRINCIPALS REPORTED MORE CHALLENGES RELATED TO STUDENT MOTIVATION THAN IN PRIOR YEARS

While educators gave their schools higher or stable marks for climate and culture on the whole in 2020-21, they believed that students were less enthusiastic to learn than in prior years. It is important to note that these responses represent educator perceptions and do not necessarily reflect true student motivation. Students may be more motivated in some contexts than others, and educators observe only their own specific contexts. Teachers may have struggled to engage students due to the sudden shift to remote learning. Additionally, decreased enthusiasm in the 2020-21 school year may be expected given the unique challenges students have faced during

the pandemic in Partnership districts and in schools throughout the country. Figure 8.4 shows the percent of teachers and principals in Partnership districts who agreed or strongly agreed that students were enthusiastic to come to school and learn in each year of the survey, highlighting two takeaways. First, both teachers and principals were significantly less likely to report that students were enthusiastic to learn in 2020-21 than in prior years. Second, over each of the three years, teachers were less likely than principals to report that students were enthusiastic to learn.

FIGURE 8.4. Educator Perceptions That Students Are Enthusiastic to Learn
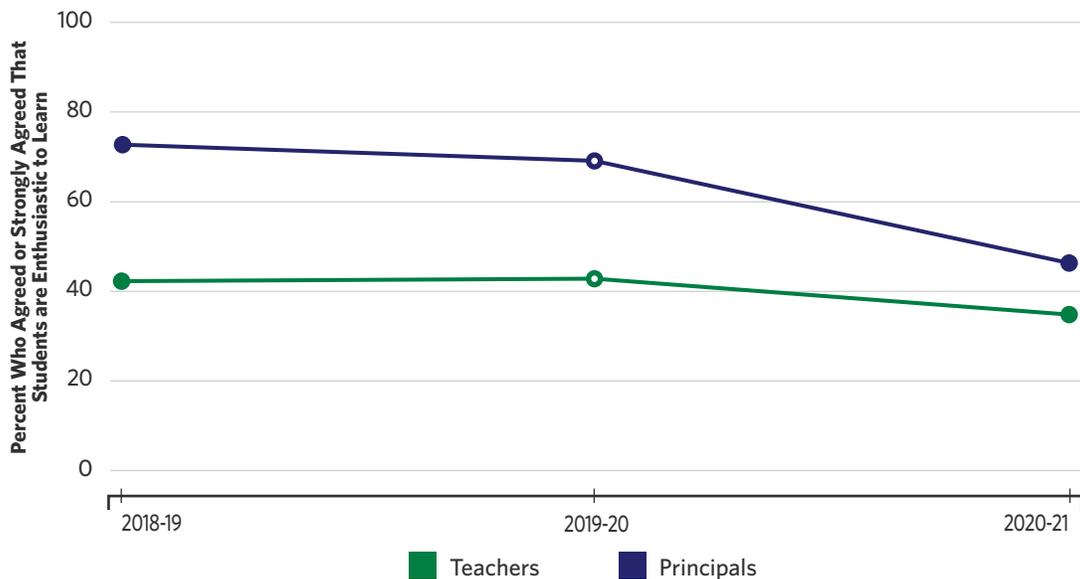
Note: Educators were asked about the extent to which they agreed that students were enthusiastic to learn/ come to school. Response options were "strongly agree," "agree," "neither agree nor disagree," "disagree," and "strongly disagree." Percentages represent the share of educators across Partnership districts who agreed or strongly agreed.

It may therefore be unsurprising that educators perceived student motivation as a barrier to school improvement; on average, educators in 2020-21 rated student motivation as a great hindrance to school improvement. Figure 8.5 provides the share of educators over the three survey waves reporting that a lack of student motivation was either a great hindrance or the greatest hindrance to achieving their improvement goals. Again, we underscore that these figures represent educator perceptions of student motivation as a hindrance. School improvement is a complex endeavor that encases intersecting dimensions including school and district processes, educator retention and effectiveness, and turnaround supports. No single factor hinders successful turnaround, and any of the intersecting dimensions of school improvement can also contribute to student motivation and enthusiasm to learn.

Still, regardless of the mechanisms underlying Figure 8.5, it paints a concerning picture for school turnaround. First, the share of educators reporting that a lack of student motivation was at least a great hindrance spiked in 2020-21 after remaining relatively stable in the previous two years. The green line shows that approximately half of teachers believed that student motivation was a

major hindrance in the first two survey waves, but this figure increased to approximately two-thirds in 2019-20. The dark blue lines show an even more dramatic increase for principals. The share of principals reporting that student motivation was a great or the greatest hindrance to improvement tripled from 24% in 2019-20 to 75% in 2020-21.[4] Second, in each of the first two study years, a greater share of teachers than principals perceived student motivation as a great hindrance to improvement. In 2020-21, principals closed that gap and even reversed the pattern, as a slightly greater share of principals than teachers reported that student motivation was a great hindrance to school improvement.

FIGURE 8.5. Educator Perceptions of Low Student Motivation as a Hindrance to School Improvement Over Time
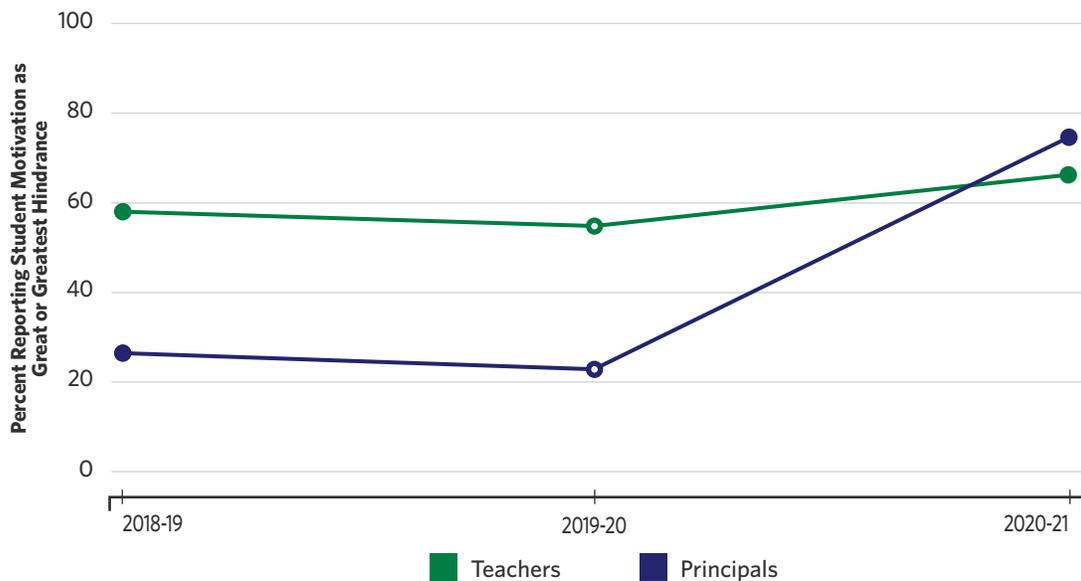
Note: Educators were asked to indicate the extent to which lack of student motivation was a hindrance to achieving improvement goals. Response options were "not a hindrance," "a slight hindrance," "a moderate hindrance," "a great hindrance," or "the greatest hindrance." Percentages reflect the share of educators selecting a great hindrance or the greatest hindrance in each year of the survey.

EDUCATORS PERCEIVED THAT THEIR SCHOOLS' LIMITED CAPACITY TO EFFECTIVELY ENGAGE PARENTS WAS A MAJOR HINDRANCE TO SCHOOL IMPROVEMENT IN 2020-21

Partnership school educators also cited challenges related to parent engagement, and felt these challenges created an especially salient hindrance to improvement in 2020-21. Figure 8.6 provides the share of educators reporting that a lack of parent engagement was either a great hindrance or the greatest hindrance to achieving their improvement goals over the three survey

waves. We see a similar pattern as in Figure 8.5. Again, the rate of educators reporting a great hindrance remained relatively stable in the first two survey waves before surging in 2020-21, with the share of teachers increasing by about one-fourth from 48% to 60% and the share of principals more than doubling from 29% to 68%.

More Partnership than non-Partnership school teachers believed that parent engagement was a barrier to school improvement. Although not shown here, approximately 65% of teachers in Partnership schools compared with 56% of teachers in non-Partnership schools reported that parent engagement was a great or the greatest challenge to meeting improvement goals.[5]

One teacher highlighted the importance of parent engagement to improvement efforts, *"I think the lack of community and parent engagement with the school is our biggest issue that is exacerbating everything else."*

FIGURE 8.6. Educator Perceptions of Low Parent Engagement as a Hindrance to School Improvement Over Time
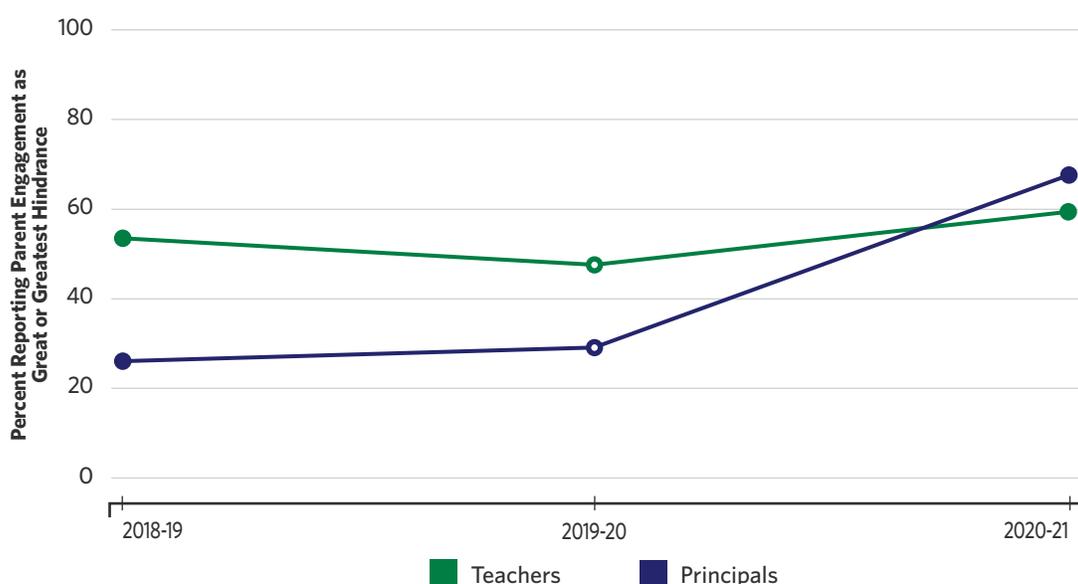
Note: Educators were asked to indicate the extent to which a lack of parent engagement was a hindrance to achieving improvement goals. Response options were "not a hindrance," "a slight hindrance," "a moderate hindrance," "a great hindrance," or "the greatest hindrance." Percentages reflect the share of educators selecting a great hindrance or the greatest hindrance in each year of the survey.

Parent engagement may have been a particular challenge in 2020-21 due to the largely virtual format of schooling as well as the disproportionate effect of the pandemic on Partnership communities. As we showed in Section Three, teachers reported that few students had parents at home who could support their school work. Educators may have also faced more challenges communicating with parents focused on caring for younger children or sick relatives.

EDUCATORS AMPLIFIED THEIR FOCUS ON PARENT ENGAGEMENT DURING THE 2020-21 SCHOOL YEAR

While teachers and principals reported significant challenges related to parent and family engagement, district leaders highlighted that virtual schooling provided new opportunities for parents to become involved in their children's schooling. For example, the Red Wings district Leader said, *"Our parental involvement has increased exponentially. Parents are actually getting involved. They're talking to the teachers. They're asking for help."*

A subset of superintendents said that the COVID-19 pandemic prompted them and other educators to try new and sometimes productive strategies to engage families and communities. The charter leader of Flames noted, *"I actually think we've been communicating more with families, especially since they are right there with the student."* This increase may have been precipitated by the realization that parent engagement was increasingly important in a remote environment. The charter leader of Rangers explained:

> *We have to focus on engagement because it's very easy for us to lose contact with our families. The school, the admin team, they've done a phenomenal job. They're functioning as if we were in school, so they still have all their PBIS [Positive Behavioral Interventions and Supports]. They have classroom contests where you may get pizza delivered to your house. We really had to think out of the box in order to keep our families engaged. On Friday, they went to all of our families and passed out PBIS T-shirts for all the kids, just keeping them engaged in school and interested, and just trying to make sure that the families know that we're here. I'm sure most of the schools would give out food baskets. I think it's four times a week. We changed. I think that's where we are right now... all those things I think are helpful with keeping engagement because if you don't have the students there, you certainly can't teach them.*

This quote helps illustrate why the urgency around parent engagement increased for some leaders, as parents were recognized as even more integral partners than in prior years given that students were largely learning in a virtual environment. The increased saliency of parent engagement may help explain why principals and teachers saw parent engagement as such a challenging yet important issue to address.

At the same time, the fact that it became even more essential led to new strategies that some hoped would continue once they returned to "normal." For instance, the district leader of Devils elaborated in greater detail regarding why and how communication and outreach improved:

> *I would say the big thing is just trying to keep everybody informed on what's going on with robo calls, updating the websites and social medias, lots of frequent phone calls from our staff to families to make sure we have those two-way communications or just to check in on kids and families. The family-engagement piece is something that I think we're going to keep, and specifically, at the elementary, we've got a group who just— the engagement with families and the follow-through has been phenomenal. I keep*

highlighting with our district's leadership team and our board that that is something we have to continue when we get back. Two things: we didn't know how bad the engagement was with families, but we also didn't know how easy it would be to create that engagement. That'll be something that we continue to highlight when we get back to reality.... That's a piece that we have struggled with forever, just getting people willing to do that outreach, both good and bad. It's been attacked so often in the past. Now, it's become what we do because we have to. I think it's a good thing.

While the positive views of parent engagement may appear at odds with the largely pessimistic teacher and principal survey responses, it may be the case that Partnership leaders were trying to shine a light on a known challenge in their districts. As we discuss in Section Nine, some Partnership leaders saw themselves as cheerleaders for their principals and teachers; some of the more positive perspectives on parent engagement may stem from that type of lens.

In line with district leaders' comments, teachers and principals also perceived an increased school focus on family and community engagement in the 2020-21 school year. Figure 8.7 shows that a greater share of both teachers and principals reported that family and community engagement strategies was a major or primary focus in the 2020-21 school year than in prior years. The share of principals reporting a major focus or above, shown in dark blue, increased in each year of the survey from nearly 50% in the first wave to 60% in the second and finally to 76% in the third survey wave. The share of teachers reporting parent and community engagement was a major focus or above remained stable at approximately one-third in the first two years before increasing by nearly 20 percentage points to 54% in 2020-21.

FIGURE 8.7. Educator Perceptions of School Focus on Family and Community Engagement Strategies
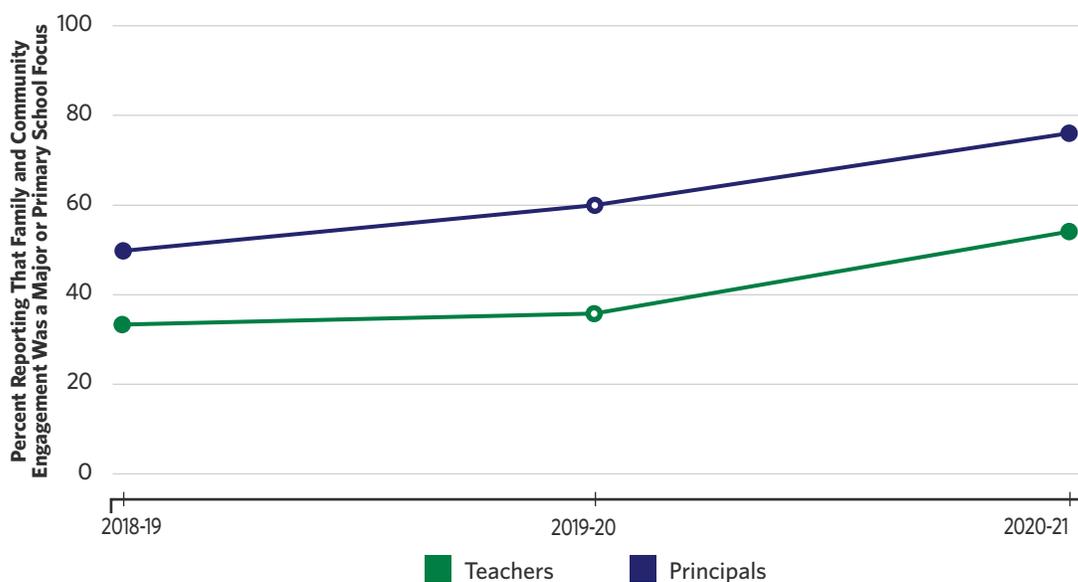
Note: Educators were asked to indicate the extent to which family and community engagement strategies were a focus in their school. Response options were "not a focus," "a minor focus," "a moderate focus," "a major focus," or "a primary focus." Percentages reflect the share of educators selecting a major focus or a primary focus in each year of the survey.

SUMMARY

School climate and culture are critical to turnaround because they are a foundational part of the infrastructure that underlies school improvement. As we describe in Section Nine, educators reported that climate and culture were major considerations in deciding whether to stay in their positions and principals reported climate and culture as one of the major factors contributing to hiring difficulties—underscoring the importance of climate and culture to a stable and high quality educator workforce. The pandemic introduced challenges but also unearthed some benefits related to culture and climate, as educators worked to improve student motivation, parent engagement, and the general culture in their schools. Educators reported greater challenges motivating students and engaging families, but fewer challenges related to safety and student behavior. Some district leaders highlighted the positives of remote learning for engaging parents. Teachers and principals by and large believe they built strong rapport with students despite the virtual learning settings. As Partnership schools and districts continue their school improvement efforts in a more typical schooling environment, it will be important to continue tracking perceptions of school climate and culture in order to better understand its role as a mechanism for school improvement—especially as students and educators return from the pandemic year and accelerate learning moving forward.

SECTION EIGHT NOTES

1. As we described in Section Three, we did ask teachers about the extent to which classroom management—one component of school climate—was a challenge in their classrooms this year. Of all the classroom challenges presented, the classroom management items were least salient for teachers.

2. For brevity, in the remainder of this section, we refer to non-Partnership schools in Partnership districts simply as "non-Partnership schools."

3. In the 2019-20 survey, teachers on average reported that student behavioral interventions were a moderate to major focus (3.5 on a 5-point scale) in their school while in the 2020-21 survey they reported a moderate focus (3.0). In the 2019-20 survey, teachers on average reported that increased assistance with behavioral interventions would yield a "significant benefit" (4.0 on a 5-point scale) compared with a "moderate benefit" this year (3.7). Principals followed similar patterns.

4. All increases from Year 2 to Year 3 were statistically significant at $p<0.001$.

5. There was no significant difference between principals of Partnership and non-Partnership schools.

**Partnership Turnaround:
Year Three Report**

SECTION NINE:
HUMAN CAPITAL

EPIC

Education Policy
Innovation Collaborative

Section Nine:
Human Capital

"If I was a teacher, I wouldn't leave my school and try another school in the middle of a pandemic, but I think [turnover's] been a problem. It's been getting worse every year anyway, so it's kind of hard to say."

—Rangers Charter Leader

The first two interim reports from this study showed that human capital challenges were especially salient for Partnership schools and districts, which contend with high levels of educator mobility coupled with hiring and recruitment challenges. These findings align with a growing literature that has demonstrated that human capital—including mobility, recruitment, absenteeism, and effectiveness—is critical to school improvement (Henry et al., 2020; Strunk et al., 2016). Although Partnership school and district leaders were developing and implementing new strategies to improve teacher retention and ease hiring challenges before the pandemic (described in the Year Two Report), COVID-19 introduced new human capital challenges as educators struggled with the shift to online instruction, resource constraints, lost child care, and new uncertainties around accountability (see Section Seven). Any new, continuing, or intensified human capital challenges that have emerged have the potential to undercut improvements that were underway before the COVID-19 pandemic emerged.

In this section, we begin with an analysis of teacher mobility both leading up to and during the COVID-19 pandemic. We then discuss teachers' perceptions of working conditions, which evidence suggests contribute to their decisions about whether to continue in their current positions (Geiger & Pivovarova, 2018; Johnson et al., 2012; Johnson & Birkeland, 2003; Loeb et al., 2005; Simon & Johnson, 2015). Next we describe educators' perceptions of hiring challenges and the extent to which schools in Partnership districts focused resources on teacher and principal hiring during the intervention. We move next to a discussion of teacher absenteeism in Partnership schools and districts, a salient challenge for low-performing schools aiming to create a stable and cohesive learning environment for students. We conclude with a discussion of school leadership, a critical ingredient in successful turnaround (Duke, 2004; Meyers & Hambrick Hitt, 2017) that may have been even more essential during the pandemic.

As with previous sections, we highlight here that human capital outcomes during the 2020-21 school year are a combination of Partnership and COVID-19-related effects; it is not possible to disentangle the effect of Partnership from the effect of COVID-19. However, we consider these findings to be informative toward understanding human capital challenges in Partnership schools and districts, progress toward addressing human capital challenges, and how the pandemic may have affected ongoing efforts to recruit and retain talent.

TEACHER RETENTION

Teachers can take a number of different pathways out of their positions—they can leave their school, their district, or teaching entirely. Each of these possible pathways out has relevance to school improvement efforts under Partnership, which, as we show in the Theory of Change in Section One, aims to increase educator retention as one mechanism toward improving longer-term student outcomes. Teacher turnover from a school can disrupt ongoing improvement efforts because an unstable teacher workforce can hinder progress, collaboration, and student learning. Turnover from the district is relevant to the Partnership Model in particular because Partnership is a district-level intervention. To the extent that Partnership improves district-level systems and processes, it may have the effect of retaining more talent within the district as teachers seek out a positive working environment. Finally, high turnover from teaching can reduce overall teacher supply, already a challenge for high-needs schools like those in Partnership.

In this subsection, we begin by providing event study estimates showing the probability of leaving Partnership schools and districts. We move next to event study estimates of the probability of leaving teaching in Michigan public education entirely. Similar to Section Four, these event study estimates provide the estimated difference in mobility for teachers in Partnership schools relative to teachers in a set of similarly low-performing schools that did not receive Partnership services.

Partnership Teachers Continued to Leave Their Schools and Districts at Higher Rates than Other Teachers Throughout the State, Though Cohort 2 Showed Signs of Progress

In the year of Partnership identification, nearly 30% of Partnership school teachers left their schools, either to move to a new school in the district, move to a new district, or leave Michigan public schools entirely. By comparison, about 16% of teachers in other schools in the state left their schools in those years. These stark differences reflect similar patterns throughout the country, as several studies show that high-poverty, high-underrepresented minority, and low-performing schools experience higher turnover than other schools (Clotfelter et al., 2006; Ingersoll, 2001; Simon & Johnson, 2015). As we noted in earlier interim reports and has been shown in other studies of turnaround efforts, high rates of teacher turnover can detract from improvement efforts by creating school-level instabilities, diminishing the efficacy of curricular and professional development programs, weakening educator collaboration, reducing the effectiveness of the school's teacher workforce, undermining curricular continuity, and ultimately suppressing the effects of turnaround (Henry et al., 2020; Strunk et al., 2019).

Partnership School Teachers Left Their Schools and Districts at Similar Rates in 2019-20 to Comparison School Teachers

Figure 9.1 provides event study estimates of teachers' propensities to leave the school and the district, respectively. Because these models estimate a dichotomous outcome (leaving the school vs. not leaving, or leaving the district vs. not leaving), the resulting estimates can be interpreted as the difference in the probability of turnover (relative to the identification year) for teachers in Partnership schools relative to teachers in a set of non-Partnership comparison schools.

FIGURE 9.1. Event Study Estimates of the Effect of Partnership on Teachers Leaving the School and District

Leaving the School
Cohort 1

Cohort 2

Leaving the District
Cohort 1

Cohort 2

—— Cohort 1   —— Cohort 2
······ Cohort 1 Upper and Lower Bound   ······ Cohort 2 Upper and Lower Bound
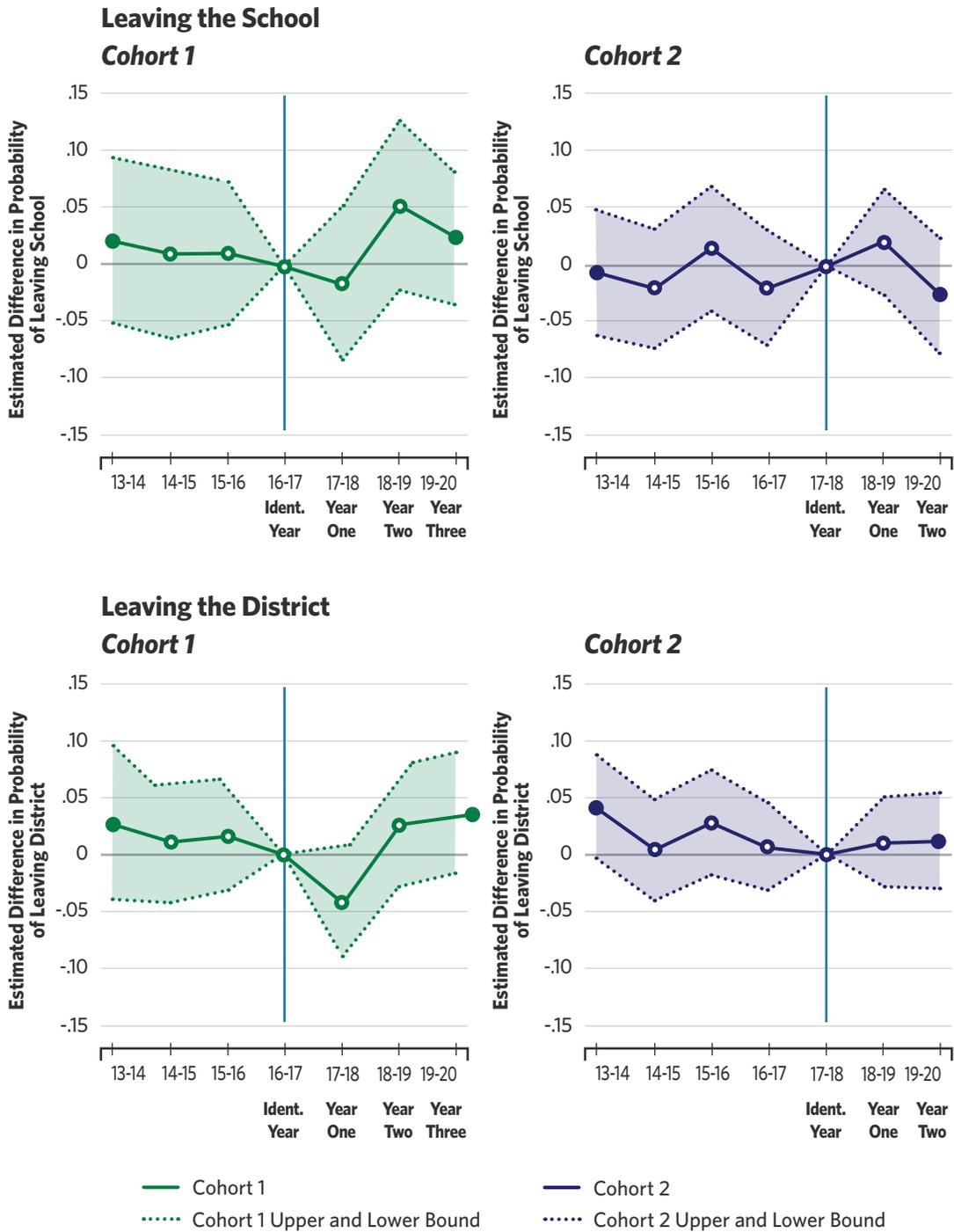
Note: Markers represent coefficient estimates on the interaction between Partnership and year indicators in event study models, with the identification year (2016-17 for Cohort 1 and 2017-18 for Cohort 2) as the omitted reference year. Shaded regions represent 95% confidence intervals. Estimates can be interpreted as estimated change in the probability of leaving the school (first row) or leaving the district (second row).

In all four panels of the figure, the confidence intervals (delineated by dotted lines) overlap with the zero line, indicating that there were no significant effects of Partnership on the probability of teachers leaving their school (first panel) or leaving their district (second panel) for either cohort of Partnership schools. As we show in the full results in Appendix C, these results are similar for Partnership schools inside and outside of DPSCD.

Descriptively, however, we see that Cohort 1 Partnership schools were experiencing decreases in turnover before Partnership identification and into the first year of Partnership implementation. This trend reversed in 2018-19, although again the increases in turnover—while substantively large—were not statistically significant. In 2019-20, Cohort 1 Partnership school exit rates decreased whereas district exit rates very slightly increased (still not statistically significant). By contrast, progress on reducing turnover for Cohort 2 was less steady relative to comparison schools leading into Partnership identification, and Cohort 2 Partnership schools may have seen an average increase (not statistically significant) relative to comparison schools in the first year of implementation (2018-19). However, school exits dropped in 2019-20 for Cohort 2 Partnership schools relative to comparison schools and district exits remained relatively stable.

Cohort 2 Partnership Schools Experienced Less Turnover During the Pandemic than in Previous Years

The event studies in Figure 9.1 provide estimates of turnover relative to teachers in a set of similar comparison schools and do not show overall trends in year-to-year exit rates for teachers in Partnership and comparison schools (which are also low-performing schools) over time or during COVID-19. To understand the extent to which teachers in our sample of low-performing schools were more or less likely to leave their schools and districts than in the Partnership identification year, we can examine overall changes in these probabilities. These are represented by the coefficient estimates on the year indicators from the event study regressions. Table 9.1 displays the coefficient estimate for the 2019-20 indicator, which provides the estimated change in probability of leaving the school or district for comparison schools, followed by the coefficient estimate for the interaction between the Partnership indicator and the year indicator. The latter reflects the extent to which teachers in Partnership schools were more or less likely to transfer than teachers in comparison schools (these are the coefficient estimates graphed in Figure 9.1). For teachers in Partnership schools, the difference in probability of leaving the school or district relative to the omitted reference year is the sum of both of these coefficient estimates, shown in the third row. We provide each of these estimates for the overall sample, and then separately for Partnership and comparison schools within and outside of DPSCD.

The first takeaway from Table 9.1 is that all of the estimates in the first row are negative for both cohorts, which shows that the probability of turnover from both the school and district in 2019-20 was lower in comparison schools than in the identification year—though the lack of statistical significance means we cannot say with certainty that teacher turnover was different in 2019-20 than in the identification year.

The second row of each panel, showing the differential effect for Partnership school teachers relative to comparison school teachers, highlights differences by cohort. In the Cohort 1 panel,

the coefficients in the second row for the overall models (Columns 1 and 2) are descriptively positive. That means teachers in Cohort 1 Partnership schools were descriptively more likely to leave their schools and districts than their peers in comparison schools, though again these estimates are not statistically significant.

We do find significant and substantively important differences in exit propensities for Cohort 2 teachers, however. The Cohort 2 panel shows that the probability of leaving the school was *lower* for Partnership than comparison teachers. While the difference between Partnership and comparison schools shown in the second row is not statistically significant, the linear combination of the coefficients on the year variable and interaction term shown in the third row indicates that Cohort 2 Partnership teachers were in fact nearly 4 percentage points less likely to leave their schools in 2019-20 than in the reference year. Column 3 shows that this decrease in turnover was driven by teachers in DPSCD, who were 6 percentage points less likely to leave their schools in 2019-20 than in the identification year.

TABLE 9.1. Event Study Estimates for 2019-20 Predicting the Probability of Teachers Leaving the School and District						
	Overall		DPSCD only		No DPSCD	
	(1)	(2)	(3)	(4)	(5)	(6)
	Leave school	Leave district	Leave school	Leave district	Leave school	Leave district
Cohort 1						
2019-20	-0.032 (0.022)	-0.014 (0.020)	-0.002 (0.046)	-0.017 (0.026)	-0.036 (0.025)	-0.015 (0.022)
Partnership x 2019-20	0.025 (0.030)	0.036 (0.027)	-0.012 (0.050)	0.035 (0.034)	0.057 (0.044)	0.038 (0.033)
SUM: 2019-20 + Partnership x 2019-20	-0.007 (0.022)	0.022 (0.019)	-0.014 (0.029)	0.018 (0.027)	0.021 (0.038)	0.023 (0.026)
N	20,252	20,252	5,788	5,788	14,464	14,464
Cohort 1						
2019-20	-0.010 (0.017)	-0.010 (0.014)	-0.007 (0.035)	-0.014 (0.027)	-0.012 (0.018)	-0.011 (0.016)
Partnership x 2019-20	-0.026 (0.026)	0.012 (0.022)	-0.054 (0.039)	-0.004 (0.030)	0.016 (0.038)	0.046 (0.031)
SUM: 2019-20 + Partnership x 2019-20	-0.036[+] (0.020)	0.001 (0.016)	-0.061[*] (0.023)	-0.017 (0.016)	0.004 (0.033)	0.035 (0.027)
N	34,580	34,580	8,967	8,967	25,613	25,613

Note: Cells in first two rows of each panel contain coefficient estimates from the 2019-20 year indicator and the interaction between the Partnership and 2019-20 year indicators with standard errors clustered at the school level in parentheses. Third row of each panel provides the linear combination of the coefficients in the first two rows and associated standard error. Estimates reflect the estimated deviation from the omitted reference year (2016-17 for Cohort 1 and 2017-18 for Cohort 2). Full regression table estimates are provided in Appendix C. + p<.1, * p<.05, ** p<.01, *** p<.001

Together, these results show that Partnership did not appear to significantly affect teacher turnover from schools and districts in the first three years of the intervention. However, Cohort 2 Partnership school teachers were significantly and substantially less likely to leave their schools in the 2019-20 school year than they were in prior years.

We note that these estimates reflect the average effect of Partnership on teacher turnover. The descriptive decreases in turnover, even for Cohort 1, indicate that some Partnership schools and districts likely experienced less staff mobility in the 2019-20 school year—pointing to potential pockets of progress in some Partnership schools and districts.

Indeed, Partnership district leaders suggested in interviews that educator turnover was not excessively high compared with prior years. In response to questions about turnover, the majority of leaders said that they didn't see dramatic changes due to COVID-19. As in prior years, many did note having to rely on younger teachers, and that more experienced teachers cost more, which presented a strain on their financial stability. In terms of seeing little change, the charter leader of Wild, for example, said:

> I would say [turnover is] pretty stable. It's about the same before, pre-pandemic, so stable. Before the Partnership Agreement, not stable. We're stable now. We've got a younger crowd, so I don't think that really the pandemic affected retention, or turnover...

Others, like the charter leader of Lightning even said, *"We've been lucky... zero turnover."* The district leader of Black Hawks echoed this general sentiment and added:

> If somebody has left, they've either left because they moved out of state, or it was mutually agreed upon that this just isn't a good fit because we hire for fit. None of them have been surprises, so we've been able to fill the positions. We haven't had any issues.

Some leaders attributed improvements in hiring and retention to the changes in their hiring systems. Yet some improvements did not come without tradeoffs or a cost, as the charter leader of Kings explained:

> I came in, and we had already had 30 percent—no, maybe 45 percent certified teachers, so more of my staff was uncertified. Now I have two uncertified teachers. They had 10 when I got here. As I get certified teachers, they cost more. They're supposed to. I go from an uncertified teacher that may be a long-term sub getting a sub teacher rate to a teacher with three, five years experience, you're talking about $15,000.00. That's 15,000 times six or eight people. All of these decisions have really a monetary impact.

As the Rangers charter leader suggested in the quote at the top of this section, the pandemic may have delayed teacher plans to leave their schools or districts. To better unpack these possibilities, later in this section, we explore survey data to understand teacher plans and motivations for leaving or staying in their current schools and districts after the pandemic.

Cohort 1 Teachers Left the Profession in 2019-20 at Higher Rates than Their Peers in Other Low-Performing Schools, Who Were Also More Likely to Leave than in Prior Years

In 2016-17, the year that the state identified the first Partnership cohort, approximately 7% of Cohort 1 teachers left teaching in Michigan public schools entirely. In 2017-18, the year that the state identified the second cohort, about 13% of Cohort 2 teachers left. Relative to teachers in all other schools throughout the state (9% in 2016-17 and 10% in 2017-18), exit rates were slightly lower for Cohort 1 and higher for Cohort 2 teachers.

Figure 9.2 shows event study estimates of teacher exit over time for each cohort. The panel depicting Cohort 1 shows that teacher exit from the profession has climbed in the last two years of Partnership, and was significantly higher in the 2019-20 school year. However, we caution that teacher exit was at a low point in the reference year and it may be the case that exits were only climbing back to their pre-Partnership levels rather than climbing as a result of the intervention itself. It is also possible that teachers left for COVID-19-related reasons, which we explore next. In Cohort 2, the probability of exit remained stable across all study years.

FIGURE 9.2. Event Study Estimates of the Effect of Partnership on Teachers Leaving the Profession

Note: Markers represent coefficient estimates on interaction between Partnership and year indicators in event study models, with the identification year (2016-17 for Cohort 1 and 2017-18 for Cohort 2) as the omitted reference year. Shaded regions represent 95% confidence intervals. Estimates can be interpreted as estimated change in the probability of leaving Michigan public education.

As with the models predicting teacher exits from their schools and districts, the figures above illustrate the extent to which the probability of teacher exit in Partnership schools differed from a similar set of comparison schools before and after Partnership implementation. To understand the extent to which teachers in low-performing schools—including Partnership and the comparison schools— were more likely to exit during the pandemic, we can look at the event study estimates for 2019-20.

Table 9.2 provides these estimates overall, in DPSCD, and outside of DPSCD, with Cohort 1 in the first three columns and Cohort 2 in the second three columns. Columns 1 and 4 of Row 1 show that the probability of teacher exit was 4–5 percentage points higher in 2019-20 than in the reference year for comparison schools. These increases are driven by schools outside of DPSCD, as the significant estimates in Columns 3 and 6 show. The estimates in the second row of the table provide the difference between Partnership and comparison schools in 2019-20. The third row again shows the linear combination of these two coefficients, representing the estimated difference in teacher exit for Partnership schools in 2019-20 relative to the same set of schools in the omitted reference year.

We again see cohort differences, with teachers in Cohort 1 Partnership schools even more likely to exit the profession than comparison school teachers. Taken together, the two estimates show that the probability of leaving teaching for Cohort 1 teachers was 8 percentage points higher in 2019-20 than in 2016-17 (the omitted reference year). Column 2 shows that this increase in Partnership school teacher exit is greater in DPSCD. In contrast, teachers in Cohort 2 Partnership schools were no more likely than their peers in comparison schools to leave teaching in 2019-20; similar to comparison teachers, Cohort 2 teachers were 5 percentage points more likely to leave in 2019-20 than in 2017-18, the omitted reference year (p<0.001). This was driven by teacher exits from non-DPSCD schools.

TABLE 9.2. Event Study Estimates for 2019-20 Predicting the Probability of Teachers Leaving Michigan Public Education						
	Cohort 1			Cohort 2		
	(1)	(2)	(3)	(4)	(5)	(6)
	Overall	DPSCD only	No DPSCD	Overall	DPSCD only	No DPSCD
2019-20	0.040** (0.013)	0.004 (0.021)	0.043** (0.014)	0.051*** (0.010)	-0.000 (0.026)	0.056*** (0.011)
Partnership x 2019-20	0.044* (0.020)	0.091** (0.027)	0.018 (0.030)	-0.002 (0.016)	0.044 (0.028)	0.005 (0.023)
SUM: 2019-20 + Partnership x 2019-20	0.084*** (0.015)	0.095*** (0.018)	0.061* (0.026)	0.049*** (0.012)	0.043** (0.012)	0.060** (0.020)
N	20,252	5,788	14,464	34,580	8,967	25,613

*Note: Cells in first two rows of each panel contain coefficient estimates from the 2019-20 year indicator and the interaction between the Partnership and 2019-20 year indicators with standard errors clustered at the school level in parentheses. Third row of each panel provides the linear combination of the coefficients in the first two rows and associated standard error. Estimates reflect the estimated deviation from the omitted reference year (2016-17 for Cohort 1 and 2017-18 for Cohort 2). Full regression table estimates are provided in Appendix C. + p<.1, * p<.05, ** p<.01, *** p<.001*

Taken together with the findings above on teacher exits from schools and districts, these results show that across both Partnership and comparison schools, teachers were more likely to exit teaching altogether after the 2019-20 school year, but teachers who stayed in the profession were descriptively less likely to transfer within or out of district.

It is possible that the increased probability of leaving teaching in Cohort 1 schools in 2019-20 is a Partnership effect, but it is also possible that the pandemic affected teachers in Cohort 1 schools more than their comparison school peers. As we showed in Sections One and Three of this report, Cohort 1 schools are the most disadvantaged in the state and these schools and their communities likely grappled with outsized effects of COVID-19, which could have led more teachers to exit the profession. While we cannot necessarily parse the Partnership effect from the COVID-19 effect, we can explore differences in mobility by demographic and experience groups. To investigate the extent to which COVID-19 may have disproportionately affected teacher exit among certain groups, we turn next to event study models focused on whether specific subgroups of teachers were more likely to exit.

Teacher Exits in the 2019-20 School Year Were Concentrated Among Black and Novice Teachers, and Not Among Retirement-Eligible Teachers

There are reasons to believe that certain subgroups of teachers may have been more likely to leave teaching due to the pandemic. Across the country and in Michigan in particular, there have been concerns that the pandemic would lead retirement-eligible teachers to leave teaching at higher rates than in previous years due to health concerns (French, 2021; Livengood, 2021). Teaching experience may also play a role in teachers' employment decisions, as novice teachers who were not yet established in the teaching profession may elect to leave due to increased workload and emotional labor associated with teaching during COVID-19, or more experienced teachers may leave due to health concerns. The disproportionate effect of COVID-19 on Black and Lantinx communities may drive teachers in these communities to leave teaching at higher rates than White teachers. Finally, there is evidence that women have left the workforce at higher rates than men to take on child care responsibilities as daycares and schools shuttered and eldercare responsibilities increased (Zamarro & Prados, 2021). To better understand whether different groups of teachers were more likely to exit teaching during the pandemic, we show the probability of leaving teaching for four subgroups of teachers defined by their (a) retirement eligibility status, (b) teaching experience, (c) race/ethnicity, and (d) gender.

These estimates come from the fully interacted event study models described in Equation 3 of Section Two. We show estimates for teachers in comparison and Partnership schools relative to the omitted reference year. Because comparison schools are also low-performing and high-needs schools, both estimates are relevant for understanding how the pandemic may have affected teacher exits in low-performing schools.

Retirement-Eligible Teachers Did Not Exit Teaching at Higher Rates in 2019-20 than in Previous Years

We do not find that retirement-eligible teachers in either Partnership or comparison schools were more likely to exit teaching in 2019-20. Figure 9.3 provides the relevant linear combinations

representing the probability of exiting teaching for retirement-eligible and non-retirement-eligible teachers for Partnership (green bars) and comparison (dark blue bars) teachers. The vertical lines overlapping the bars provide 95% confidence intervals. There are three ways to look at these vertical lines. First, they show whether teachers in the subgroup (e.g., retirement-eligible teachers in Partnership schools, as the first bar shows) were significantly more likely to leave in 2019-20 than in the omitted reference year. When the vertical line overlaps with 0 on the y-axis, we cannot say with 95% confidence that teachers in the subgroup were more likely to leave in 2019-20 than in the omitted reference year (i.e., the difference between 2019-20 and the omitted reference year is not statistically significant). When they do not overlap the zero line, the difference between 2019-20 and the omitted reference year for the subgroup is statistically significant.

Second, the vertical lines show whether Partnership teachers in the given subgroup were more likely to leave than comparison school teachers. If the bottom of the vertical line for Partnership overlaps with the top of the vertical line for comparison, we cannot say with 95% confidence that the subgroup of teachers in Partnership schools was more likely to leave in 2019-20 than the subgroup of teachers in comparison schools. When the top and bottom of these lines do not overlap, the difference between the subgroups in Partnership and comparison schools is statistically significant.

Third, they show whether teachers in one subgroup were more likely to leave than teachers in the other subgroup. Again, if the bottom of the vertical line for retirement-eligible teachers overlaps with the top of the vertical line for non-retirement-eligible teachers, we cannot say with 95% confidence that retirement-eligible teachers were more likely to retire than non-retirement-eligible teachers (or vice versa).

The first set of bars in the first panel of Figure 9.3 are both positive, showing that retirement-eligible teachers in both Partnership and comparison schools were descriptively more likely to exit teaching in 2019-20 than in the omitted reference year. However, the large vertical lines overlaying the estimates for retirement-eligible teachers overlap zero on the y-axis, indicating that this estimate is not statistically significant; the true effect is somewhere between -0.07 and +0.14. The first set of bars in the second panel shows that in Cohort 2, retirement-eligible teachers in Partnership schools were descriptively *less* likely to leave in 2019-20 than in the omitted reference year. However, again, the large confidence interval overlapping 0 for this estimate and the estimate for comparison schools indicates that the estimate is not statistically significant. In both cohorts, the overlapping confidence intervals for Partnership and comparison school teachers indicate that there is no significant differential effect in exiting for retirement-eligible teachers in Partnership schools.

The second set of bars in each panel indicate that the probability of exit was significantly higher for non-retirement-eligible teachers in 2019-20 than in the omitted reference year. While the estimate is larger for Partnership school teachers, the 95% confidence intervals overlap, suggesting that there is no significant difference in exit rates for non-retirement-eligible teachers in Partnership relative to comparison schools; both are more likely to leave. Looking across the 95% confidence intervals on the retirement-eligible and non-retirement-eligible bars, it is clear that although non-retirement-eligible teachers were more likely to exit than in the omitted reference year, they were not significantly more likely to exit than retirement-eligible teachers.

FIGURE 9.3. Change in Probability of Exiting the Profession by Retirement Eligibility, 2019-20
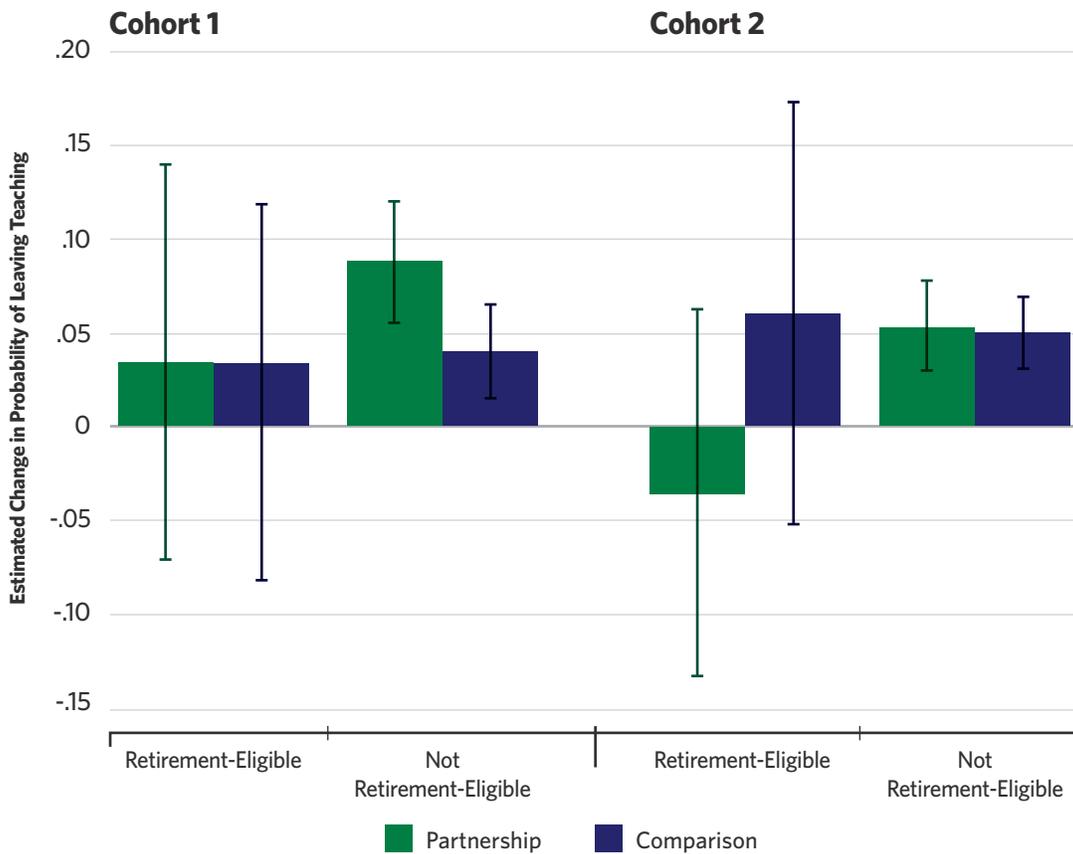
Note: Bars and spikes represent linear combinations from triple-difference event study models predicting probability of exiting the profession by retirement eligibility. Linear combinations for both groups are relative to the same group in the omitted reference year.

It is important to note that the retirement-eligible estimates are relative to retirement-eligible teachers in the same group of schools in the reference year. Although not shown in Figure 9.3, retirement-eligible teachers were more likely to exit than their non-retirement-eligible peers, but not more likely than retirement-eligible teachers in the reference year.

We highlight three possible reasons that might explain why we do not detect differences between retirement-eligible and non-retirement-eligible teachers. First, it is possible that retirement-eligible teachers in these schools were not more likely to exit the profession even if similar teachers in schools that were not included in our Partnership and comparison school sample did exit at higher rates as news reports have suggested. Teachers in Partnership and comparison schools may have felt safer, for example, since their schools were more likely to be fully remote than other schools throughout the state. For example, the district leader of Canadiens said, "*I don't think that [turnover] happened because of the choice that teachers had. I think that could become an issue next year if we require teachers to come back or even require a hybrid. I can anticipate an increase in retirement.*"

They may have also had more economic concerns as a result of the pandemic. For example, one teacher shared in the teacher survey open response section, "*I would like to retire, but it is not*

feasible financially." Another teacher wrote, *"I've been a teacher for 25 years and this year by far has been the most difficult, stressful and emotionally taxing. I wish I could retire and give my family the little that is left of me, but I can't financially do that."*

Second, in our sample of low-performing schools, there are relatively few retirement-eligible teachers in any given year. It may be the case that we do not find significant results because we do not have the power to detect small differences in average exit rates.[1] Third, the data in these analyses only include teachers employed through the beginning of the 2020-21 school year. It is possible that teachers left during the 2020-21 school year. We will examine 2020-21 exits in the Year Four Report.

Increases in Teacher Exits Were Largely Concentrated Among Less Experienced Teachers

Figure 9.4 provides the estimated change in probability of leaving teaching for teachers with 0–3 years of experience, 4–15 years, and 16 years or more. In both cohorts and sets of comparison schools, the probability of leaving teaching is descriptively—and usually significantly—higher for all experience levels than in the omitted reference year. We do not find statistically significant differences between Partnership and comparison schools in any of the experience groups. We also do not see statistically significant differences across experience groups within Partnership or comparison schools, respectively. However, we note two descriptive patterns. First, the largest increases in exiting the profession are among novice teachers with 0–3 years of experience. This estimate is especially high for Cohort 1 novice teachers, who were nearly 16 percentage points more likely to leave teaching in 2019-20 than novice teachers in Cohort 1 schools in the identification year. Second, in both cohorts, the estimated probability becomes lower with more experienced subgroups, though again these differences are not statistically significant.

FIGURE 9.4. Teacher Exits by Teaching Experience, 2019-20
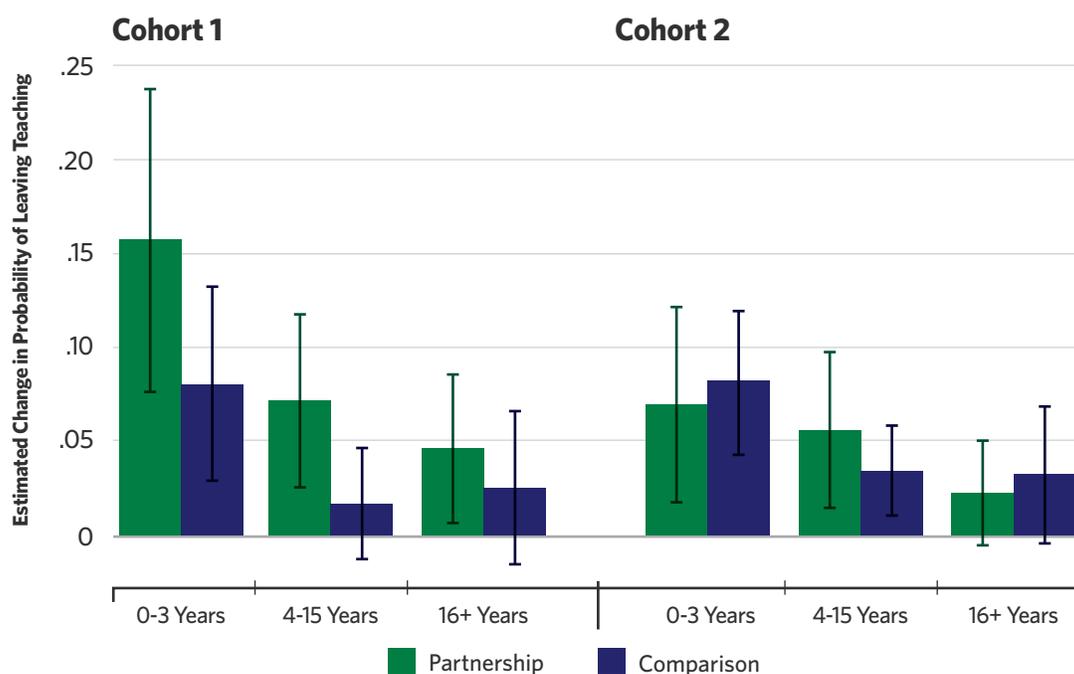
Note: Bars and spikes represent linear combinations from triple-difference event study models predicting probability of exiting the profession by teaching experience group. Linear combinations for both groups are relative to the same group in the omitted reference year.

In interpreting these differences, we note that low-performing schools rely disproportionately on novice teachers due to high turnover. This may result in the ability to detect significant effects among this subgroup of teachers.

However, the especially large estimates for novice teacher exits in Cohort 1 in particular may reveal important patterns. Less experienced teachers may have felt they had more opportunities to shift careers than experienced teachers who are vested in the retirement program and may have more financial responsibilities. Teachers throughout the country reported burnout related to COVID-19 (Pressley, 2021), but less experienced teachers may have more latitude to take a break or shift careers in the face of burnout. For example, one novice teacher shared in the teacher survey:

> *They ask way [too] much of teachers and pay us little to nothing. I wish I could stay and help my students and give more but I am already burnt out in my first year, struggling to make ends meet, giving it my all every day. I can't do it.*

More experienced teachers may feel stuck in teaching even if they want to leave. For example, one experienced teacher shared:

> *I wish I could tell my 18-year-old self to never go into teaching. I love teaching. I love the students. But this profession has cost me so many things in life. I am drowning in student loans due to taking on graduate degrees that were required at the time to keep my teaching certificate. The pay is low and climbs slowly. The financial burdens have taken extreme tolls on my life as well as my family.*

Another teacher wrote, "*I am personally sick of teaching. It is not worth it. But since I am vested, I am literally stuck. I want to leave the field and do something different, but I am stuck.*"

Another potential reason we might see less experienced teachers leaving teaching at higher rates has to do with family commitments. Teachers with less experience are likely to be younger, and thus more likely to have small children at home. Given the lack of child care availability during the pandemic (Calarco et al., 2020), inexperienced teachers may have needed to drop out of the workforce to take care of their children.

Higher Rates of Teachers Exiting the Profession in Low-Performing Schools in 2019-20 Were Concentrated Among Black Teachers

COVID-19's disproportionate effect on Black and Latinx communities may have led to higher rates of teachers in these communities exiting the profession. Losing teachers of color is a serious concern given substantial evidence that students of color—and Black students, in particular—benefit from teachers of color both in the short term and longer term (Dee, 2004, 2005; Egalite et al., 2015; Gershenson et al., 2016; Harbatkin, 2021).

Figure 9.5 provides the estimated change in probability of leaving teaching for White and Black teachers. While we also examine this for Hispanic or Latinx teachers and teachers of other races/ethnicities, the numbers are too small to be able to precisely examine their propensities to exit.

Black teachers in Partnership and comparison schools for both cohorts were significantly more likely to exit the profession in 2019-20 than in the reference year. In Cohort 1, Black teachers in both sets of schools were approximately 13 percentage points more likely to exit in 2019-20. In Cohort 2, Black teachers in Partnership schools were 6 percentage points more likely to exit and comparison school

teachers were 9 percentage points more likely. Black teachers in Cohort 1 and their comparison schools were significantly more likely to exit than White teachers in those schools; differences between Black and White teachers were not statistically significant for Cohort 2. There were no differences between Partnership and comparison schools, suggesting that COVID-19-related challenges for Black teachers were similar across all low-performing schools in our study sample.

FIGURE 9.5. Teacher Exits by Race and Ethnicity, 2019-20
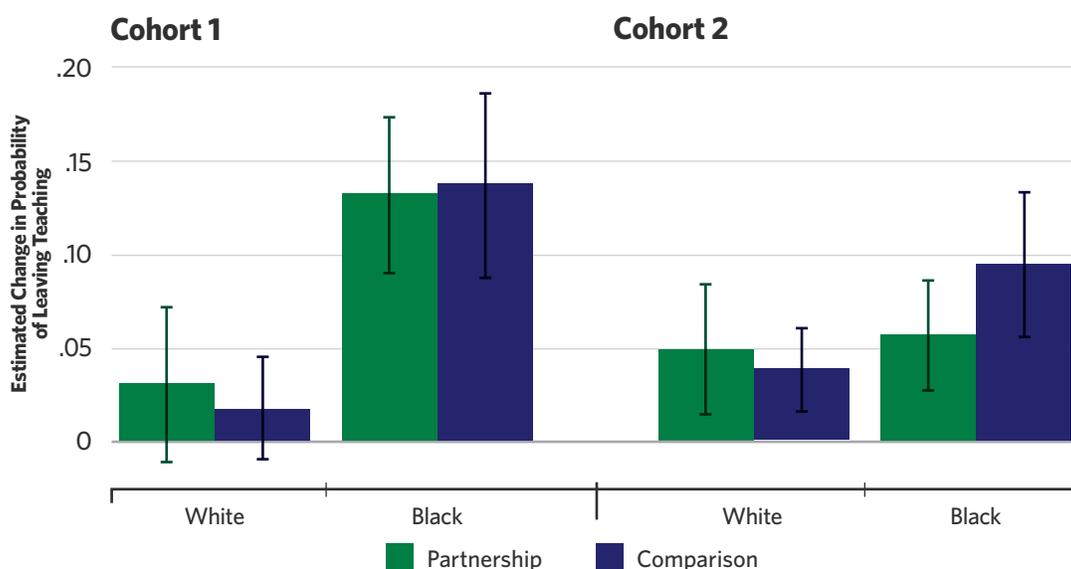
Note: Bars and spikes represent linear combinations from triple-difference event study models predicting probability of exiting the profession by race or ethnicity. Linear combinations for both groups are relative to the same group in the omitted reference year. The fully interacted model also included categories for (1) Hispanic or Latinx, and (2) all other race/ethnicities. We do not show these estimates because they are too noisy to interpret due to very small numbers of teachers in each subgroup. In the Cohort 1 models in 2019-20, there are 15 Hispanic or Latinx teachers in Partnership schools (12–17 in any given year in the sample) and 48 in comparison schools (48–84 in any given year). In the Cohort 2 models in 2019-20, there are 31 Hispanic or Latinx teachers in Partnership schools (26–37 in any given year) and 51 in comparison schools (51–89 in any given year).

The disproportionate exit rates by Black teachers are especially concerning given the high share of Black students in Partnership schools shown in Section One. An abundance of research has found that Black students with Black teachers have higher test scores, higher course grades, and more positive behavioral and disciplinary outcomes. They are also more likely to graduate from high school and attend college when they have Black teachers (Dee, 2004, 2004; Egalite et al., 2015; Gershenson et al., 2016; Harbatkin, 2021; Ouazad, 2014; Redding, 2019). To the extent that Black teachers are replaced by White teachers, students in Partnership schools may fare worse in future years.

Women Were Not More Likely to Exit Teaching than Men in 2019-20

Finally, Figure 9.6 provides the estimated change in probability of teaching by gender. While other research and news reports show that women have disproportionately dropped out of the workforce or paused their careers due to COVID-19 (Kashen et al., 2020), we do not find that women—who make up about three-fourths of the teacher workforce in this sample of schools—were significantly more likely to leave teaching than their male colleagues. In fact, in Cohort 2 Partnership schools, male teachers were more likely to leave than female teachers relative to same-gender teachers in their schools in the identification year. We do not find significant differences between Partnership and comparison schools in either cohort.

FIGURE 9.6. Teacher Exits by Gender, 2019-20
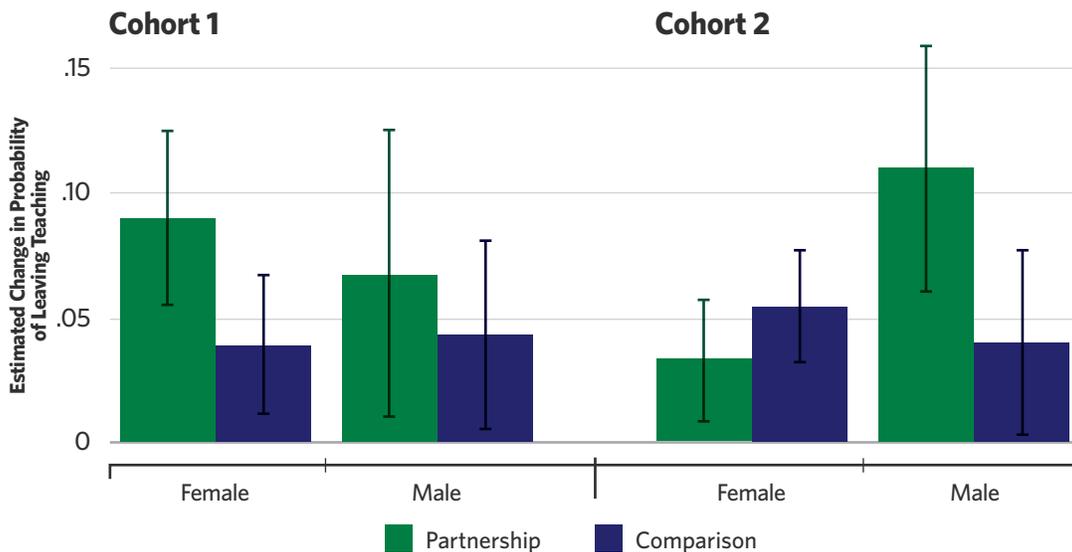
Note: Bars and spikes represent linear combinations from triple-difference event study models predicting probability of exiting the profession for female and male teachers. Linear combinations for both groups are relative to the same group in the omitted reference year.

The Share of Teachers in Partnership Districts Reporting Plans to Stay in Their Current Positions Increased in 2020-21

The event study estimates above describe teacher mobility at the end of the 2019-20 school year. While we do not yet have the data to examine mobility at the end of the 2020-21 school year, there are a variety of reasons the pandemic may have affected teachers' employment decisions. First, fewer teachers left their schools and districts at the end of the 2019-20 school year than in prior years. While this finding may signal progress toward teacher retention in Partnership and comparison schools, it may also be the case that teachers delayed career decisions until after the pandemic. As the district leader quoted at the top of this section suggested, teachers may not have wanted to leave their schools during a pandemic. In this situation, we might expect an uptick in teacher mobility after the 2020-21 school year. Second, teachers may have left *during* the 2019-20 school year due to COVID-19-related factors that may have been larger in Partnership schools. Our event study models would not capture within-year mobility in the 2019-20 school year. Finally, the V-shaped economic recovery means there may be more employment options for teachers seeking to leave the profession than there were prior to the 2019-20 school year (Schneider, 2021). These teachers may have identified new opportunities for the next school year.

Figure 9.7 provides teacher reports of their plans in Partnership and non-Partnership schools in Partnership districts over the three survey waves.[2] In the first survey wave, teachers were permitted to select multiple plans (e.g., leave for a position in the same district *and* leave for a position in a different district). We coded duplicate responses two ways in 2018-19, represented in the graphic as 2018-19A and 2018-19B. In A, we assumed the most extreme leaving option. For example, a teacher who reported plans to leave their school and their district would count as planning to leave the district. In B, we assumed the most extreme staying option for those who reported plans to stay in their school and the most extreme leaving option for those who reported plans to leave

their school. For example, a teacher who reported plans to stay in their school and leave their school would count as planning to stay in their school, while a teacher who reported plans to leave their school and district would count as leaving their district. We therefore consider the A and B bars to represent the upper and lower bounds of teachers' expressed preferences in 2018-19.[3] In 2019-20 and 2020-21, teachers were required to select only one option.

FIGURE 9.7. Teacher Plans for the Next School Year

Note: Teachers were asked, "Which of the following best describes your plans for next school year?" In the 2018-19 school year only, respondents were allowed to select multiple options (e.g., they could say they planned to leave their school and leave their district, leave their district and leave education, etc.). We coded duplicate responses two ways in 2018-19, represented in the graphic as 2018-19A and 2018-19B. In A, we assumed the most extreme leaving option. For example, a teacher who reported plans to leave their school and district would count as leaving the district. In B, we assumed the most extreme staying option for those who reported plans to stay in their school and the most extreme leaving option for those who planned to leave their school. For example, a teacher who reported plans to stay in their school and leave their school would count as staying in the school, while a teacher who reported plans to leave their school and district would count as leaving the district. We therefore consider the A and B bars to represent the upper and lower bounds of teachers' expressed preferences in 2018-19.

There are four takeaways from Figure 9.7. First, in 2020-21, the vast majority of teachers in both Partnership and non-Partnership schools (over 80%) expressed plans to stay in the same position in their current school. Second, the share of teachers in both Partnership and non-Partnership schools reporting plans to stay in their current position and school increased from the second

study wave. In Partnership schools, it increased from 72% in 2019-20 to 82% in 2020-21. In non-Partnership schools in Partnership districts, the increase was slightly less steep—from 77% in 2019-20 to 84% in 2020-21. If the calculations in option A provide the more accurate read of teachers' 2018-19 plans, only 58% of Partnership and 68% of non-Partnership teachers expressed plans to stay in their same positions in the first year of study and the share of teachers reporting plans to stay increased over each year of Partnership implementation. Third, the share of teachers in both Partnership and non-Partnership schools reporting plans to leave education for another field decreased from 2019-20 to 2020-21—and again over each year if option A is more accurate. Fourth, the share of teachers planning to transfer to a different district has been steadily decreasing in both sets of schools, suggesting any district-level processes designed to retain teachers in district may be beginning to pay off.

Finally, while we do not have the ability to identify precise trends from the first survey wave, we can use the midpoint of the A and B bars as a "best guess." Under this assumption, the share of teachers planning to stay in their same school and position in 2018-19 was about 68% in Partnership schools and 76% in non-Partnership schools. Both of these rates are slightly lower than the share of teachers in 2019-20 reporting plans to stay, and substantially lower than the share of teachers this year reporting plans to stay. These results provide some evidence that teachers in Partnership districts were becoming more inclined to stay in their schools and positions over time.

Malleable Factors Such as Leadership, Culture and Climate Were Most Salient to Teacher Decisions to Stay

There are a host of factors that contribute to teachers' decisions to stay in or leave their positions in a typical school year. There is evidence from other states that teachers in low-performing schools are especially concerned with factors related to administrative support (e.g., school and district leadership), disciplinary enforcement, safety, and salary in their considerations about whether to remain in their schools (Viano et al., 2020). Findings from the Year Two Report align with this evidence, showing that in Partnership schools in particular, teachers cited school leadership, culture and climate, and their students as reasons for wanting to remain in their positions. On the other hand, Partnership teachers cited leadership, workload, and compensation as reasons for leaving their positions.

Figure 9.8 unpacks these reported plans by the three mobility outcomes in the teacher mobility event study models above for Partnership schools and non-Partnership schools. Specifically, we asked teachers to characterize the extent to which each item was a factor in their plans for the following year. Response options were "not a factor," "a minor factor," "a moderate factor," "a major factor," or "a primary factor." Figure 9.8 provides the percent of teachers who reported that each item was a major factor or a primary factor on the 2020-21 survey. The first panel shows responses from Partnership school teachers while the second shows responses from non-Partnership school teachers. In each panel, responses from teachers reporting plans to *stay* in their school, district, and education are on the right, while responses from teachers reporting plans to *leave* their school, district, and education are on the left.

The top two sets of bars on the right side of each panel show that culture and climate and school leadership were the top factors teachers reported in their decisions to stay in their school, district, and Michigan public education. These findings are similar to teacher reports in prior years.

Responses to each item are relatively similar across teacher's planned pathways (i.e., teachers planning to leave their schools reported similar factors to teachers planning to leave their districts and to teachers planning to leave education).

The left side of the panel shows that the most salient factors for teachers choosing to leave were workload and pay across all three planned pathways out. The next most common responses were leadership, culture and climate, and accountability designation. The least salient factors were students and commute (by comparison, stayers ranked their students among the top three factors).

FIGURE 9.8. Factors Contributing to Teacher Plans for the 2021-22 School Year

Partnership Schools

Factor	Leavers — Leave School	Leavers — Leave District	Leavers — Leave Education	Stayers — Stay in School	Stayers — Stay in District	Stayers — Stay in Education
Culture and Climate	32.8	25.0	19.8	60.9	60.2	59.7
Leadership	44.8	39.9	32.1	57.2	57.1	57.3
Students	16.1	10.4	10.6	44.9	43.9	42.9
Pay	45.8	57.3	57.1	44.4	43.1	43.5
Workload	47.4	56.5	59.0	40.2	39.5	39.8
Commute	14.6	10.2	5.9	34.7	34.1	33.7
Accountability Designation	25.2	27.6	26.8	29.6	29.0	29.0

Leavers ← 100 80 60 40 20 0 | 0 20 40 60 80 100 → **Stayers**

Percent of Teachers Reporting Major or Primary Factor

Leave School / Stay in School
Leave District / Stay in District
Leave Education / Stay in Education

Non-Partnership Schools

	Leavers	Stayers
Culture and Climate	31.7 / 30.6 / 13.7	64.9 / 63.5 / 62.4
Leadership	50.8 / 51.3 / 34.0	53.9 / 53.7 / 54.5
Students	12.8 / 14.3 / 11.6	52.8 / 50.8 / 48.7
Pay	46.3 / 55.4 / 62.4	41.5 / 40.6 / 41.1
Workload	43.4 / 49.2 / 63.1	39.4 / 38.9 / 38.8
Commute	12.1 / 12.2 / 9.6	30.7 / 29.8 / 28.9
Accountability Designation	37.7 / 42.5 / 35.1	21.4 / 21.6 / 23.2

Percent of Teachers Reporting Major or Primary Factor

Legend:
- Leave School — Stay in School
- Leave District — Stay in District
- Leave Education — Stay in Education

Note: Teachers were asked the extent to which each item factored into their plans to leave or stay in the 2021-22 school year. Response options were "not a factor," "a minor factor," "a moderate factor," "a major factor," or "a primary factor." Percentages represent the weighted share of respondents reporting the item was a major or primary factor. Items are sorted by frequency for stayers in Partnership schools.

With regard to differences between Partnership and non-Partnership schools, more teachers in Partnership schools than non-Partnership schools ranked workload as a major or primary factor in their decisions to leave their school or district. It may be that teaching in a Partnership school comes with greater responsibilities due to turnaround efforts. On the other hand, fewer teachers in Partnership than in non-Partnership schools ranked school leadership as a major or primary factor in their decisions to leave. This finding aligns with our discussion of school leadership later in this

section, where we show that over the course of the intervention, teachers in Partnership schools rate their principals as more effective than teachers in non-Partnership schools. If Partnership school teachers perceive their leaders to be more effective, it is unsurprising that they are less likely to leave their schools and more likely to stay due to school leadership.

There was some variation in the salience of factors across planned pathways out. Specifically, school- and district-level factors such as leadership and culture and climate matter more to teachers planning to leave their schools and districts than teachers planning to leave education. Viano and colleagues (2020) refer to factors like these as malleable school processes because school and district administrators have the bandwidth to change them in the short term. On the other hand, factors that may be determined by state and district policy and collective bargaining agreements, such as pay and workload, matter more to teachers planning to leave the teaching profession. Viano and colleagues (2020) refer to pay in particular as a structural feature because it is not malleable in the short term and is subject to policies outside the school and in some cases district locus of control. Workload may have both malleable and structural characteristics—school leaders can carry out processes designed to streamline teacher positions but may not have the resources to hire additional support when needed. These differences may point to potential strategies for state, district, and school leaders, respectively, to leverage in order to retain teachers in low-performing schools, districts, and the educational system.

Finally, we highlight the four items related to COVID-19, presented in Figure 9.9. The most salient COVID-19-related factor for all teachers was the way school or district administration treated them during the pandemic. Among those intending to stay, about 49% of Partnership school teachers and 43% of non-Partnership school teachers reported their administration's treatment of teachers during the pandemic as a major or primary factor in their decision. In other words, nearly half of Partnership school teachers and slightly fewer non-Partnership school teachers were satisfied enough with their administration's response to the pandemic to list it as a major factor in their decision to stay. On the other hand, among those intending to leave, about 43% of Partnership school teachers and 45–54% of non-Partnership school teachers reported their administration's treatment during the pandemic as a major or primary factor in their decision-making. That is, although nearly half of teachers were happy with their administration's response, many others were unhappy enough to want to leave their position.

Two quotes from teachers' open-ended survey responses illustrate this divide. One teacher shared that their administration's decisions about instructional modality helped them feel safe:

> *The COVID-19 rate in our community has been high for months. District administration was aware of this when making the decision to remain remote. While I've missed the more personal connection with my students, I have felt safe. Thankfully, we are scheduled to receive the vaccine before the students return.*

Another teacher shared that the pandemic exacerbated feelings of being undervalued by administration:

> *"This has been a difficult school year for all teachers I am sure. But when you have a pandemic coupled with not feeling like a valued member of the teaching team [it] really adds to the stress and anxiety level."*

FIGURE 9.9. COVID-19-Related Factors Contributing to Teacher Plans for the 2021-22 School Year

Partnership Schools

Factor	Leavers	Stayers
The way school or district administration treated teachers during the COVID-19 pandemic	38.9 / 40.5 / 38.1	49.3 / 48.5 / 48.5
Impact of COVID-19 on my or my family's health or well-being	31.1 / 32.2 / 32.5	48.5 / 47.4 / 46.9
Adequacy of the COVID-19-related safety precautions	32.0 / 33.2 / 35.9	46.9 / 46.0 / 45.4
Instructional modality offered during the COVID-19 pandemic	14.2 / 10.9 / 8.7	23.2 / 23.1 / 22.9

Non-Partnership Schools

Factor	Leavers	Stayers
The way school or district administration treated teachers during the COVID-19 pandemic	45.4 / 53.7 / 45.6	43.4 / 42.5 / 43.6
Impact of COVID-19 on my or my family's health or well-being	24.3 / 26.0 / 36.0	37.6 / 36.8 / 35.6
Adequacy of the COVID-19-related safety precautions	27.9 / 30.1 / 35.5	38.1 / 37.3 / 36.6
Instructional modality offered during the COVID-19 pandemic	11.7 / 12.0 / 16.2	19.2 / 18.8 / 18.2

Leavers — **Stayers**

Percent of Teachers Reporting Major or Primary Factor

Legend:
- ■ Leave School
- ■ Leave District
- ■ Leave Education
- ■ Stay in School
- ■ Stay in District
- ■ Stay in Education

Note: Teachers were asked the extent to which each item factored into their plans to leave or stay in the 2021-22 school year. Response options were "not a factor," "a minor factor," "a moderate factor," "a major factor," or "a primary factor." Percentages represent the weighted share of respondents reporting the item was a major or primary factor. Items are sorted by frequency for stayers in Partnership schools.

Two patterns emerge in the second two sets of bars, which represent the effect of COVID-19 on health and the adequacy of safety precautions, respectively. First, the left side of Figure 9.9 shows that teachers were more likely to cite these items as major or primary factors in their decisions to leave the profession than in their decisions to leave the district or the school—a pattern that is magnified in non-Partnership schools. The right side of the panel shows that the pattern goes in the opposite direction for intended stayers, with teachers most likely to cite health and safety as reasons to stay in their school and least likely to cite them as reasons to stay in education. In other words, while the administrative response to the COVID-19 pandemic similarly influenced teachers' decisions about whether to leave their schools, districts, or the profession, health and safety concerns were more salient for teachers planning to leave the profession.

Second, the length of the bars for stayers relative to leavers shows that health concerns and safety precautions are more salient for stayers than leavers. Specifically, 45-49% of intended stayers in Partnership schools (36–38% in non-Partnership schools) compared with about one-third of intended leavers in Partnership schools (24–36% in non-Partnership schools) cited these items as major or primary factors in their decisions.

It may be the case that many of the teachers who were going to leave due to health or safety concerns did so after the 2019-20 school year, and the remaining teachers consider these factors as signals of the administration's effectiveness and support. At the time teachers were responding to the survey, they may have assumed the pandemic would be largely over by the 2021-22 school year, making health, safety, and instructional modality less relevant. But they may have felt that their administration's response to the pandemic was relevant to their experience moving forward. For example, one teacher shared:

> There are obviously many factors and reasons teachers choose to stay and/or move
> on from where they currently work, but one thing stands firm no matter what subject
> you teach or how many years of experience you have: Teachers who do not feel
> supported end [up] leaving their district, if not the profession altogether.

The fourth sets of bars show that instructional modality was the least salient of the COVID-19-related factors for teachers in their decisions to stay or leave, but were more likely to be important for stayers than leavers. This may suggest that teachers were appreciative of administrators' decisions to stay remote for much of the school year. Indeed, survey responses combined with district modality data suggest that teachers preferred remote instruction on average. Specifically, teachers in districts that were remote-only in February (the month of survey administration) who reported plans to stay in their schools and districts, respectively, were more likely to cite instructional modality as a factor in their decision than teachers in districts with an in-person option. Teachers in remote-only districts who reported plans to leave were less likely to cite instructional modality than teachers in districts with an in-person option.

One key difference emerges between Partnership and non-Partnership school teachers. Substantially more non-Partnership school teachers who reported plans to leave their district cited their administration's response to the pandemic as a major or primary factor in their decision. This difference might be driven in part by the finding we describe later in this section, that Partnership

school teachers tend to rate their principals as more effective than non-Partnership school teachers. To the extent that Partnership school principals provided more effective leadership during the pandemic, they may have built more trust among faculty.

Together, these findings suggest that teachers in Partnership schools and districts value malleable factors such as culture and climate, leadership, and feeling supported by their administration more than other factors that might be less feasible for district and school leaders to change. Still, factors such as workload—on which school leadership in particular may have limited capacity to change without considerable investment from district and state leaders—also affect teacher decisions to leave. The role of the pandemic in future teacher retention remains opaque, but our survey findings suggest that teachers may have considered the ways their administrators responded to the pandemic as a signal of leadership support and effectiveness and might be making plans to stay or leave based on the level of support they felt during the pandemic even as the immediate health and safety threats may be waning.

The Vast Majority of Principals Reported Plans to Stay in Their Positions

Principal turnover can increase teacher turnover and decrease student achievement (Bartanen et al., 2019; Henry & Harbatkin, 2019; Miller, 2013). Moreover, principal turnover tends to be especially frequent in low-performing schools like those in Partnership (Battle, 2010; Fuller & Young, 2009; Loeb et al., 2010). However, in 2019-20, almost all principals (96% in Partnership schools and 91% in non-Partnership schools in Partnership districts) reported plans to stay in their positions in the 2021-22 school year. While it is unclear whether the 47% of principals who responded to the survey are representative of the broader population, this finding points to the potential for increased stability in Partnership schools and districts. This is important because high levels of principal turnover can undermine turnaround efforts by disrupting ongoing reform efforts, weakening relationships and trust within the school, increasing teacher turnover, and diminishing school culture and climate (Hanselman et al., 2016; Snodgrass Rangel, 2018).

Figure 9.10 summarizes principals' reported plans over time, following the same format as the teacher plans reported in Figure 9.7 above. In addition to showing that most principals planned to stay in their schools, Figure 9.10 highlights three other takeaways with respect to principals' plans for the 2021-22 school year. First, in 2020-21, no Partnership school principals reported plans to leave for a different district or charter network (a decrease from 8% in Partnership schools in 2019-20 and lower than 6% in non-Partnership schools in 2020-21). Third, a smaller share of Partnership school principals reported plans to leave education for another field or to retire than in 2019-20. As with teachers, it may be the case that principals motivated to leave due to the pandemic did so prior to the 2020-21 school year.

Together, these findings provide some suggestive evidence for increased principal retention and stability in Partnership schools and districts. As we have already noted and describe later in this section, teachers in Partnership schools in particular perceive their principals to be effective. To the extent that Partnership schools are retaining highly effective school leaders, they may be setting the foundation for meaningful school improvement.[4]

FIGURE 9.10. Principal Plans for the Next School Year
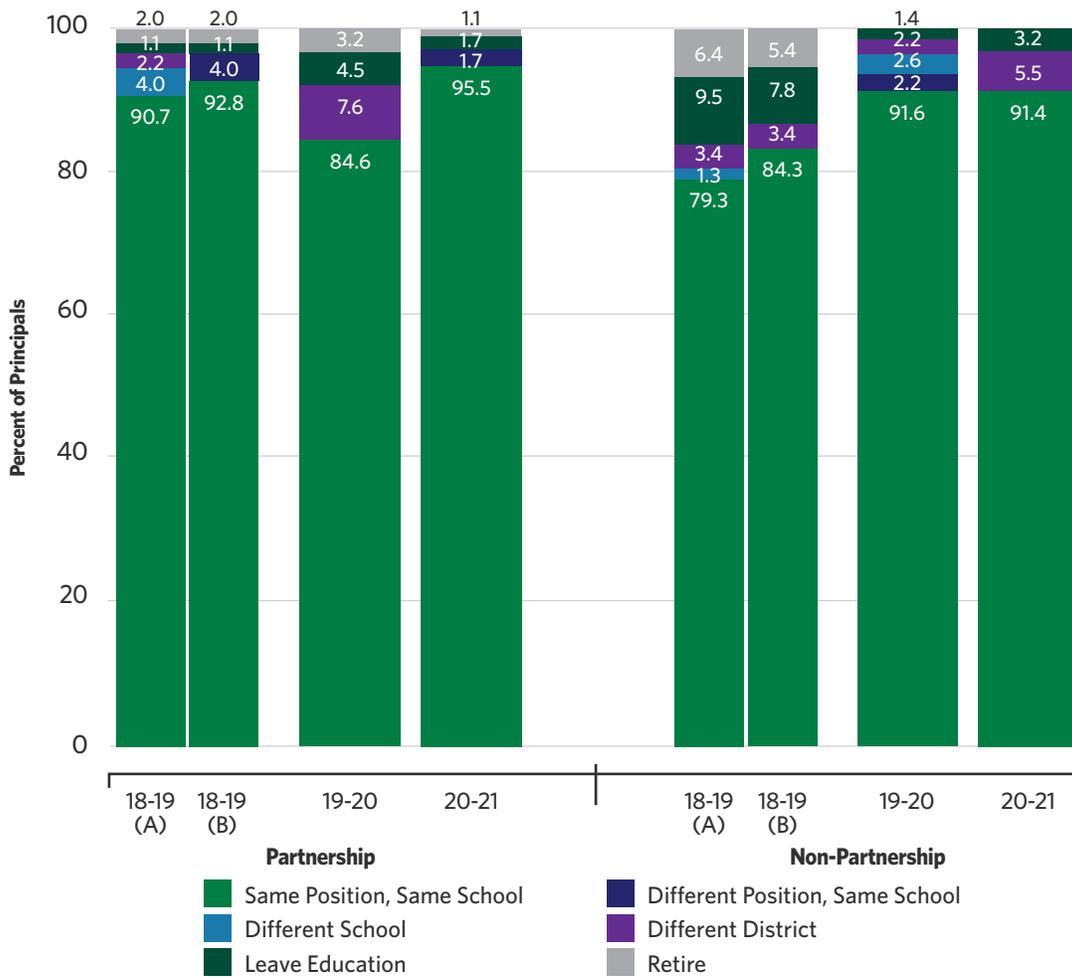
Note: Principals were asked, "Which of the following best describes your plans for next school year?" In the 2018-19 school year only, respondents were allowed to select multiple options (e.g., they could say they planned to leave their school and leave their district, leave their district and leave education, etc.). We coded duplicate responses two ways in 2018-19, represented in the graphic as 2018-19A and 2018-19B. In A, we assumed the most extreme leaving option. For example, a principal who reported plans to leave their school and district would count as leaving the district. In B, we assumed the most extreme staying option. For example, a principal who reported plans to leave their school and district would count as leaving the school. We therefore consider the A and B bars to represent the upper and lower bounds of principals' expressed preferences in 2018-19.

Culture, Climate and Leadership Were the Most Salient Factors in Principal Decisions to Stay

Similar to teachers, principals cited malleable factors such as culture and climate and leadership as the most important factors in their decisions to stay in their positions. In Figure 9.11, we provide principal responses to the question about the factors influencing their employment plans. We focus only on principals reporting plans to stay because we cannot generalize based on responses from the small number of principals reporting plans to leave their positions in 2020-21 (just four in Partnership schools and three in non-Partnership schools). However, we note that workload was a

major or primary factor for almost all principals reporting plans to leave their position regardless of pathway out, and for all principals reporting plans to leave education or retire.

Figure 9.11 provides responses from intended stayers in 2020-21, sorted in order of most to least frequent for stayer teachers in Partnership schools (shown above in Figure 9.8). Principals, like teachers, cited culture and climate and leadership as the most important factors in their decisions to stay. About half of principals in Partnership schools and more than half in non-Partnership schools reported that their students were a major or primary factor. Pay was less salient for principals than teachers (just over one-third), while workload was more salient.

FIGURE 9.11. Factors Contributing to Principal Plans to Stay in the 2020-21 School Year
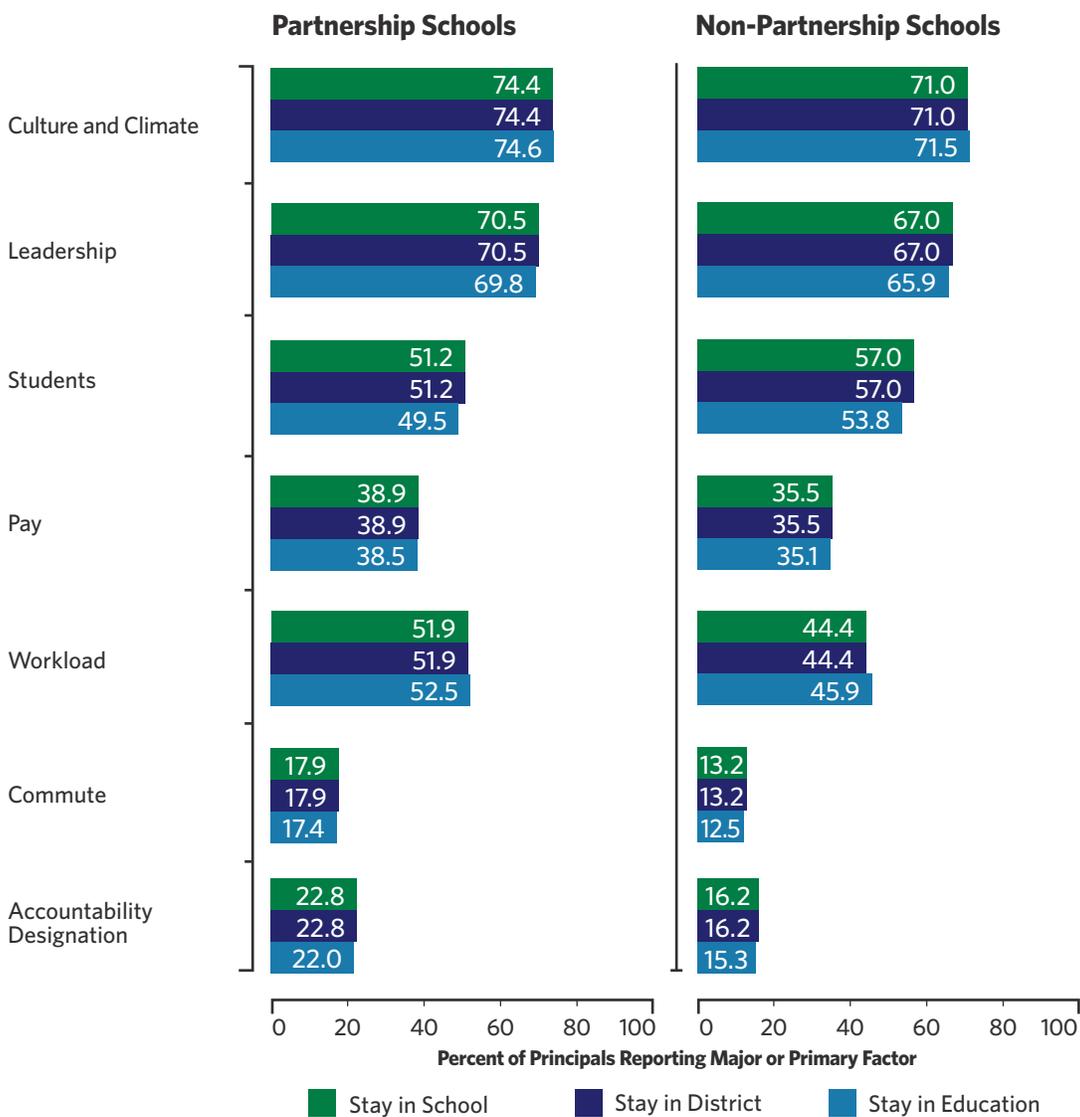
Partnership Schools **Non-Partnership Schools**

	Partnership Schools	Non-Partnership Schools
Culture and Climate	74.4 / 74.4 / 74.6	71.0 / 71.0 / 71.5
Leadership	70.5 / 70.5 / 69.8	67.0 / 67.0 / 65.9
Students	51.2 / 51.2 / 49.5	57.0 / 57.0 / 53.8
Pay	38.9 / 38.9 / 38.5	35.5 / 35.5 / 35.1
Workload	51.9 / 51.9 / 52.5	44.4 / 44.4 / 45.9
Commute	17.9 / 17.9 / 17.4	13.2 / 13.2 / 12.5
Accountability Designation	22.8 / 22.8 / 22.0	16.2 / 16.2 / 15.3

Percent of Principals Reporting Major or Primary Factor

■ Stay in School ■ Stay in District ■ Stay in Education

Note: Principals were asked the extent to which each item factored into their plans to leave or stay in the 2021-22 school year. Response options were "not a factor," "a minor factor," "a moderate factor," "a major factor," or "a primary factor." Percentages represent the weighted share of respondents reporting the item was a major or primary factor. To allow for straightforward comparison with Figure 9.8 above, items are sorted by frequency for teacher stayers in Partnership schools.

Figure 9.12 summarizes principal responses to COVID-19 related factors. Principals were similarly likely to report COVID-19-related reasons in their decisions to stay as teachers. In both Partnership and non-Partnership schools, about one-third of principals reported that the administration's treatment of them during the pandemic, the effect of COVID-19 on health, and the adequacy of COVID-19 safety precautions were major or primary factors in their decisions to stay. Instructional modality was a major or primary factor for about one-fourth of principals in Partnership schools and one-fifth of principals in non-Partnership schools.

FIGURE 9.12. COVID-19-Related Factors Contributing to Principal Plans to Stay in the 2020-21 School Year

Partnership / **Non-Partnership**

	Partnership	Non-Partnership
The Way School or District Administration Treated Teachers During the COVID-19 Pandemic — Stay in School	37.6	31.1
— Stay in District	37.6	31.1
— Stay in Education	36.4	29.2
Impact of COVID-19 on my or my Family's Health or Well-being — Stay in School	34.7	29.7
— Stay in District	34.7	29.7
— Stay in Education	33.5	28.0
Adequacy of the COVID-19-Related Safety Precautions — Stay in School	37.4	31.2
— Stay in District	37.4	31.2
— Stay in Education	36.2	29.4
Instructional Modality Offered During the COVID-19 Pandemic — Stay in School	24.7	20.5
— Stay in District	24.7	20.5
— Stay in Education	23.9	19.3

Percent of Principals Reporting Major or Primary Factor

Stay in School   Stay in District   Stay in Education

Note: Principals were asked the extent to which each item factored into their plans to leave or stay in the 2021-22 school year. Response options were "not a factor," "a minor factor," "a moderate factor," "a major factor," or "a primary factor." Percentages represent the weighted share of respondents reporting the item was a major or primary factor. To allow for straightforward comparison with Figure 9.9 above, items are sorted by frequency for teacher stayers in Partnership schools.

Again, these findings suggest that culture and climate and leadership are the most salient factors for principals deciding to stay in their positions, and COVID-19 may have contributed to employment decisions by affecting the way principals perceived their administration's support for them and for their teachers.

Teacher Reports of Job Satisfaction Continued to Climb as Many Teachers Said They Felt Supported by Their Administration During COVID-19

Job satisfaction is relevant to discussions about educator retention because those who are satisfied with their jobs may be more inclined to stay. We asked teachers and principals to indicate the extent to which they were satisfied with their job, salary, and support from their administration

during the pandemic. We asked about job satisfaction in each of the three survey waves, about salary satisfaction in the last two survey waves, and about COVID-19 in the 2020-21 survey. Figure 9.13 provides the share of teachers (first panel) and principals (second panel) who reported that they were satisfied with their job (top set of lines), salary (second set of lines), and felt supported by their administration during the COVID-19 pandemic.

The left panel shows that teacher-reported job and salary satisfaction in Partnership districts increased over each of the study years. Specifically, the line graph for teachers shows that in the first study year, 51% of Partnership school teachers and 57% of non-Partnership school teachers reported that they were satisfied with their jobs. Job satisfaction among Partnership school teachers increased at a faster rate than among non-Partnership school teachers, converging at about two-thirds of teachers in 2020-21 reporting they were satisfied with their jobs.

FIGURE 9.13. Educator Reports of Job Satisfaction
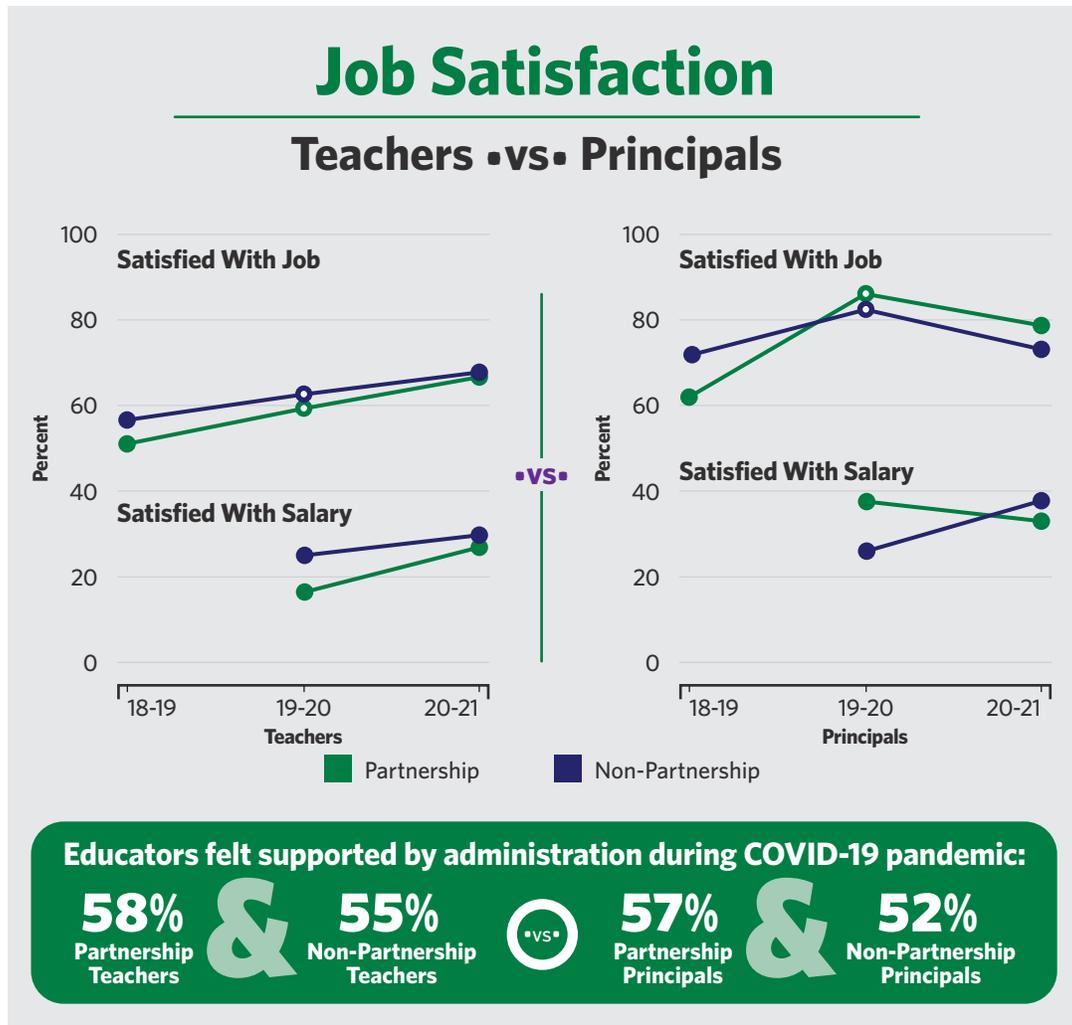
Note: Teachers and principals were asked to rate their agreement with statements that they were satisfied with their job, satisfied with their district, and felt supported by administration during the COVID-19 pandemic. Percentages represent weighted share of teachers and principals, respectively, who responded that they agree or strongly agree

with the statement. Question about satisfaction asked only in 2019-20 and 2020-21. Question about support from administration during COVID-19 asked only in 2020-21.

Among principals, job satisfaction climbed from 2018-19 to 2019-20, but then dropped back down in 2020-21. Again, job satisfaction among Partnership school principals began lower but climbed at a higher rate than it did for non-Partnership school principals. In 2020-21, 79% of Partnership school principals and 73% of non-Partnership school principals reported that they were satisfied with their jobs. We highlight that although a smaller share of principals this year reported job satisfaction, a similar share reported plans to stay in their positions. It may be the case that COVID-19-related challenges led principals to be less satisfied with their jobs, but they consider those challenges to be temporary stressors.

The lines for satisfaction with salary (only asked beginning in 2019-20) underscore three takeaways. First, while both teachers and principals tended to be satisfied with their jobs, they were substantially less satisfied with their salaries. This divide was starkest among Partnership school teachers in 2019-20, when they were about one-fourth as likely to report salary satisfaction than job satisfaction. Second, the share of teachers who were satisfied with their salaries climbed in both Partnership and non-Partnership schools from 2019-20 to 2020-21. Third, the share of Partnership school principals reporting salary satisfaction decreased from 2019-20 to 2020-21 (from 38% to 33%), while increasing among non-Partnership school principals (from 26% to 38%).

These findings are somewhat counter to the national narrative that teachers throughout the country have been unhappy with their jobs during the COVID-19 pandemic. We consider three possible reasons for this perhaps unexpected finding. First, as we showed in Section Three, Partnership districts were largely operating under remote instruction, especially at the point when we administered the survey. It is possible that educators in these districts were satisfied with the modality options their districts offered and were less likely to feel unsafe than those required to teach in person. Second, it is possible that educators were "grading on a curve" in the 2020-21 school year; that is, concerns shaping educator perceptions in prior years may have felt less salient during the pandemic. Third, as we suggest above, educators may have viewed their administration's response to the pandemic as a signal of support and effectiveness. For example, one teacher shared that they felt supported by their colleagues and leaders and was motivated to support students moving forward:

> *It has been tough, but the support of coworkers and especially the administration has been a gift. Feel that I have landed where I belong. This is my first year here, I feel heard! I also feel that we have a lot of work ahead of us, but we will get back to where we were before.*

To the extent that educators viewed Partnership school and district leaders as effective during the pandemic, they may have become more satisfied with their jobs. Indeed, Figure 9.13 shows that about 58% of teachers and 57% of principals in Partnership schools agreed or strongly agreed that they felt supported during the pandemic. In non-Partnership schools in Partnership districts, these figures were slightly lower but still more than half—55% of teachers and 52% of principals.

Data from interviews with Partnership district leaders provide some insight into these educator perceptions. In particular, superintendents described being cheerleaders for teachers, allowing for flexibility in work deadlines and synchronous lessons, listening to concerns, and being understanding about family obligations that interfere with work due to the pandemic (e.g., having small children at home who are attending online school during the day). As noted in Section Eight, some superintendents also spoke about making sure goals and expectations were not lost due to the pandemic and keeping staff focused on student growth even in the midst of the circumstances. The Oilers district leader described supporting teachers while maintaining a focus on improvement goals:

> *Wherever we're seeing gains, we're doing shout-outs. "Hey, I know it seems*
> *frustrating, but we're 8% above our passing rate from last year. Great job,*
> *everybody," those kinds of things. Then, like I said, the flexibility where we… either*
> *allowing a teacher to do a recording for an asynchronous class if they have an issue*
> *with the childcare or having a title teacher or co-teacher in there with them to*
> *support so they can be multitasking a little bit and able to support.*

The Jets district leader also talked about listening and providing encouraging words to staff:

> *Just encourage them. We're all in this together. They're not in this by themselves,*
> *right? We're gonna get through it. We have to just lean on each other and depend on*
> *each other to get through it. Just being a listening ear, right? Working collaboratively*
> *with them to figure things out. Sending encouraging words every now and then*
> *to them to encourage them, because this has been difficult for them. It's not only*
> *difficult for the students, but I also know it's difficult for them. Nobody ever imagined*
> *that you would be teaching a classroom the way that we are, and so just trying to*
> *encourage them, just trying to let them know that just as we're thinking about the*
> *safety of our scholars, we're also thinking about their safety, and just making sure*
> *that not only am I constantly talking to them, but I'm listening to them as well. I think*
> *listening sometimes is more important than offering advice to them.*

Generally, Partnership leaders specifically acknowledged that working through the pandemic has been difficult for teachers, and discussed ways in which they tried to be understanding of the stresses. To reflect their understanding about teachers' family obligations that might interfere with work due to the pandemic, superintendents noted above that they allowed for flexibility in work deadlines and the use of synchronous and asynchronous lessons. Many tried to build staff morale, like the charter leader of Kings:

> *We've tried to do fun things, but that's not me. It's mainly the staff. I keep trying to*
> *encourage them. Then we have dialogue around self-care, so like, what are you doing*
> *to take care of yourself, usually, every meeting, but I probably missed a couple where*
> *we're like, "Hey, so what have you done?" We report out.*

The charter leader of Rangers emphasized the importance of pushing through feelings of burnout and modeling a good attitude to stay motivated for their teachers:

[School leader is] always trying to give some kind of incentive to her staff. She also did her best to, with some of the extra funds, hire extra aides to be in the classroom to assist the teachers to kind of help with the burnout and to try to keep them motivated. The other thing is, regardless, she doesn't lower her expectations. We still have to teach our kids, and she's very passionate about that. When she sees that that's not happening, then she's havin' that conversation. She's really good about being passionate both ways, incentivizing when she can but also have high expectations for what our students deserve. She practice what she preach. She's a hard worker, and so she leads by example.

Responses that underscored the cheerleader theme were especially prevalent among charter leaders; over half of the Partnership charter leaders discussed how they provided teacher supports and nearly two-thirds mentioned providing supports intended to motivate and boost staff morale. Indeed, teacher survey results show that 68% of charter school teachers agreed or strongly agreed that they felt supported by their administration during the pandemic compared with 56% of TPS teachers. As we described in Section Seven, charter leaders are just one level removed from teachers because they often act as both superintendent and principal. Charter leaders may therefore have the bandwidth and access to promote on-the-ground supports that may be more challenging at scale for larger districts with variability in school leader effectiveness, characteristics, and leadership styles.

While two-thirds of teachers reported that they were satisfied with their jobs and our data point to administrative support during the pandemic as a possible explanation, another one-third of teachers did not report high levels of job satisfaction. Responses to a question about hindrances to meeting improvement goals underscore the reality that even as teacher-reported job satisfaction climbed and the majority reported they were satisfied with their jobs, educators still perceived teacher demoralization or mental health as a result of COVID-19 to be an impediment to school improvement.

Figure 9.14 provides the share of teachers and principals reporting that teacher demoralization was a great or the greatest hindrance to meeting their improvement goals, first across Partnership districts and then separately for Partnership and non-Partnership schools. There are two takeaways. First, nearly 4 in 10 teachers and one-third of principals perceived teacher demoralization as a major hindrance to improvement. This finding highlights that although the majority of teachers reported job satisfaction, some of those same teachers also felt that they or their peers were demoralized enough to potentially destabilize school improvement efforts. Second, Partnership school educators were less likely to report that demoralization was a major hindrance to improvement, suggesting that efforts in Partnership schools in particular to support teachers may have successfully improved teacher morale. Notably, while charter teachers were more likely to report that they felt supported by their administration during COVID-19, they were no less likely than TPS teachers to cite teacher demoralization as a major hindrance to improvement.

FIGURE 9.14. Educator Reports of Teacher Demoralization as a Hindrance to Improvement
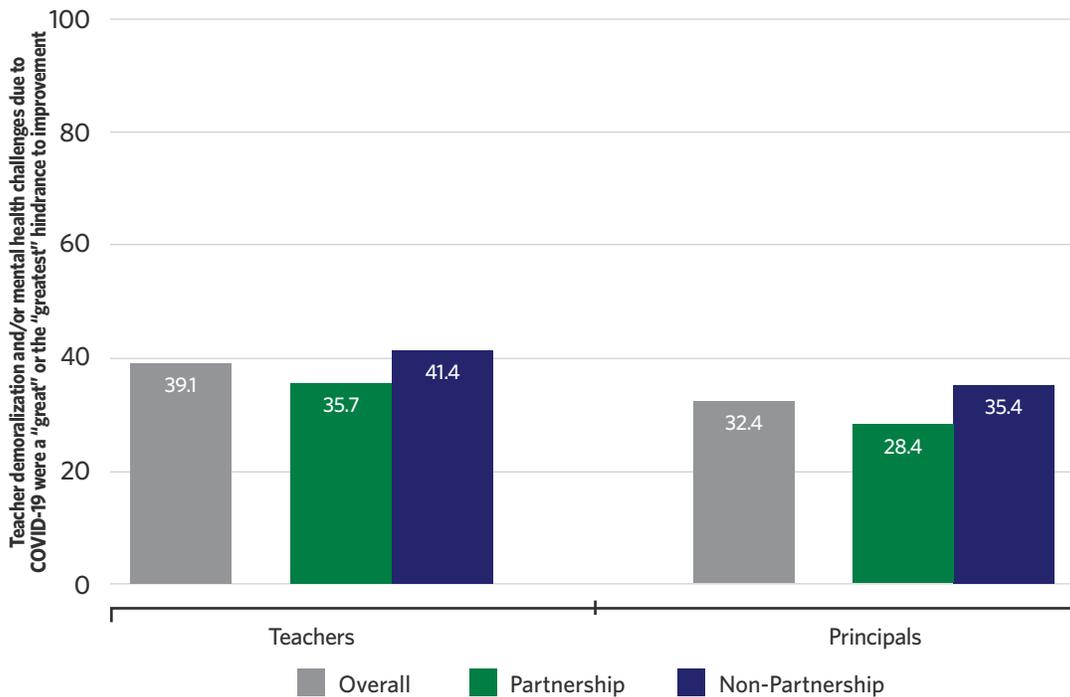
Note: Teachers and principals were asked about the extent to which teacher demoralization and/or mental health challenges due to the COVID-19 pandemic was a hindrance to improvement goals. Response options were "not a hindrance," "a slight hindrance," "a moderate hindrance," "a great hindrance," and "the greatest hindrance." Figure shows the share of teachers (first three bars) and principals (second three bars) reporting that these areas were a great hindrance or the greatest hindrance.

In summary, teachers in Partnership districts have become more satisfied with their jobs in each year of Partnership, and this satisfaction increased at a faster rate in Partnership than non-Partnership schools. Teachers also became more satisfied with their salaries over time, though the vast majority remain discontented with compensation. While the COVID-19 pandemic did not appear to reduce teacher reports of job and salary satisfaction, principal job satisfaction decreased in Partnership districts in the 2019-20 school year. Qualitative and survey data suggest that continued growth in teacher job satisfaction may stem from teachers feeling supported by their administrations during the pandemic—especially teachers in Partnership schools.

The Future for Educator Retention in Partnership Schools and Districts Appears Promising but Uncertain

Together, these findings suggest that Partnership schools and districts may be building a foundation toward improved educator retention. While Partnership schools and other low-performing schools in the state experienced increases in the share of teachers leaving the profession, teacher transfers dipped in Partnership schools in particular in 2019-20 and teachers reported that they were largely satisfied with their jobs and planned to stay in their positions in 2020-21. Almost all principals in Partnership schools reported plans to stay in their positions as well, pointing to the possibility of increased stability of school leadership.

However, it is unclear whether this progress marks a durable shift in teacher retention in Partnership schools and districts or a blip driven by COVID-19-related uncertainties. It may be the case that educators do not want to move jobs during the pandemic, and are delaying moves until after they feel the health crisis has passed. For example, the charter leader of Ducks explained their perception (also expressed by a few others) that COVID-19 might have led to people "shelter[ing] in place," which included teachers possibly staying in their current jobs:

> *Obviously with COVID, I think people just kind of sheltered in place, and so it's hard to attribute our low turnover numbers to anything but COVID for the last year, but even prior to that, would have been summer of '19, we were starting to see very, very positive trends towards retention.*

In the survey open-ended responses, one teacher who chose to transfer schools before the 2020-21 school year expressed that the move was especially challenging given the context:

> *This year has been particularly tough. I actually switched from a [district] to [district] where I am now in October of 2020 during the pandemic. I used to say people who changed schools during this crisis were nuts and it definitely has felt that way this year. The stress of teaching online while switching districts, platforms and grades has definitely impacted my teaching this year. It has been particularly hard to learn new platforms and the way a new school runs while being entirely remote and feeling the loss of a community and support network.*

The same teacher also shared feelings of burnout that may lead them to leave (or pause) the profession:

> *I used to love my job and felt successful with my job and position prior to the pandemic but since last March all of the fun and good stuff about being a teacher are gone; I miss being in charge of my classroom, being able to socialize and bond more readily with my students and make learning fun. Being online and being accessible 24/7 has been a real challenge and struggle in balancing home and work life when home and work life are now both just at home. If we are not back face to face come next fall I will be leaving the education profession and [pursuing] a career elsewhere until students and teachers are back in the classroom. I know it is so difficult because I too want everyone to be safe and feel safe but at this point for my mental health and longevity as a teacher I need to be back in the classroom otherwise this career and lifestyle that is expected of teachers during this pandemic are unsustainable and I will not continue to feel so downtrodden and beaten everyday.*

For this reason, we cannot say with certainty whether the apparent progress in teacher retention is likely to sustain in future years. To the extent that the pandemic led more educators to feel supported by their administration, educators may choose to stay in their schools and districts. On the other hand, educators who were waiting for the pandemic to end before making major life changes may leave at higher rates over the next two years.

EDUCATOR RECRUITMENT

Educator recruitment operates hand-in-hand with educator turnover. Even as schools and districts make progress in reducing turnover, some educators will always leave due to external factors. Hiring new teachers and principals to fill vacancies is especially challenging for low-performing schools and districts throughout the country (Guarino et al., 2006; Hanushek et al., 2004b). In the Year Two Report, we highlighted that Partnership district and charter leaders cited teacher supply and recruitment as a major concern. Recruitment appeared to be a less focal concern for in this year's interviews with leaders, who were more focused on immediate challenges directly related to the pandemic. Still, educator recruitment remains a critical component of successful turnaround and will likely become more salient for district and school leaders as the pandemic wanes—especially if more teachers leave after the pandemic as some Partnership district leaders suggested.

In this section, we begin by describing principal-reported hiring challenges in 2020-21 and over time. We then discuss reliance on long-term substitutes by Partnership schools and districts—an indicator that schools have had trouble filling teacher vacancies. We turn next to teacher and principal reports of their school's focus on hiring over time. Finally, we conclude with a brief discussion of teacher supply in Partnership schools and districts moving forward.

Principals Reported That Malleable In-School Factors Became More Positive Over Time While Fixed Out-of-School Factors Remained Challenges in Hiring

Several factors related to school characteristics as well as community context can impede school leaders' ability to recruit effective teachers into their school. In the Year Two Report, we showed that Partnership school leaders in the 2019-20 school year reported even greater challenges than non-Partnership school leaders. This pattern largely persisted in 2020-21, with a few exceptions that we describe later. Figure 9.15 provides average principal perceptions of factors contributing to hiring challenges across all schools in Partnership districts. The bars are sorted by positive (top) to negative (bottom) factors. Response options ranged from "very negatively impacts" (1) to "does not impact" (3) to "very positively impacts" (5). Thus, the bars that cross the midpoint reflect factors that principals felt positively affected their ability to recruit and hire teachers, bars that stop at the midpoint reflect factors that principals did not believe affected their ability to hire, and bars below the midpoint reflect factors that principals believed negatively affected their ability to hire.

Figure 9.15 underscores three main findings. First, leaders believed most of these factors played a negative role in their ability to recruit and hire teachers. Three exceptions were culture and climate, ability to offer professional development and support to teachers, and student discipline. Perceptions of the role of culture and climate and discipline are both more positive than in prior years, when principals considered culture and climate to be a non-factor and discipline to be a slightly negative, on average. Perceptions of ability to offer teacher support are similar. Second, the size of the bars related to in-school factors relative to the other two sets of bars suggests that principals considered in-school factors to be less negative influences on their ability to recruit and hire teachers than out-of-school factors. Third, principals considered competition from nearby districts or charters, health concerns related to COVID-19, teacher salaries, and community socioeconomics to be the most negative factors in their hiring and recruitment efforts.

FIGURE 9.15. Principal Perceptions of Factors Contributing to Hiring Challenges

In-School Factors

Factor	Value
Climate and Culture	3.7
Ability to Offer PD and Support to Teachers	3.2
Student Discipline	3.2
Academic Performance of the Student Body	3.0

Out-of-School Factors

Factor	Value
Student Family Background	3.0
Student Attendance	3.0
School/District Geographic Location	2.8
Community Socioeconomic Status	2.6

Other Factors

Factor	Value
School/District Partnership Status	3.0
Teacher Salaries	2.5
Health Concerns From COVID-19	2.4
Competition From Nearby Districts	2.2

(1) Very Negatively Impacts (2) Somewhat Negatively Impacts (3) Does Not Impact (4) Somewhat Positively Impacts (5) Very Positively Impacts

Negative factor   Positive factor

Extent to Which Factor Impacts Hiring

Note: Principals were asked to rate the extent to which each factor affected hiring. Response options were 1 "very negatively impacts," 2 "somewhat negatively impacts," 3 "does not impact," 4 "somewhat positively impacts," and 5 "very positively impacts." Bars represent weighted mean response across all principal respondents in Partnership districts. Bars are sorted within category in order of positive to negative impact.

In order to understand how Partnership school leaders perceived hiring challenges and how those perceptions varied over time and across schools, we created two constructs—one representing in-school hiring challenges and one representing out-of-school hiring challenges, illustrated in Figure 9.16. In-school challenges include the school's ability to offer professional development and support, culture and climate, academic performance, and student discipline. Out-of-school factors include student attendance, family background, community socioeconomics, and geography.

FIGURE 9.16. In-School and Out-of-School Hiring Challenges Constructs

Hiring Challenges
In-School •vs• Out-of-School

In-School Hiring Challenges
AFFECT ABILITY TO RECRUIT TEACHERS:

- Ability to offer professional development/support
- School climate and culture
- Student academic performance
- Student discipline

Out-of-School Hiring Challenges
AFFECT ABILITY TO RECRUIT TEACHERS:

- Student attendance
- Family background
- Community socioeconomic status
- Geographic location

Figure 9.17 shows principal responses over time to the in-school (first panel) and out-of-school (second panel) factors for Cohort 1, Cohort 2, and non-Partnership schools, respectively. Marker heights denote the average percentile of Cohort 1, Cohort 2, and non-Partnership school principal responses to items about in-school and out-of-school hiring factors. Higher scores indicate that the group of principals reported that these factors played a more positive role in their ability to recruit and hire teachers, while lower scores indicate that the group of principals reported a more negative role. The 50th percentile line represents the average principal response across all three years.

The left panel of Figure 9.17 illustrates three patterns. First, Partnership school principals perceived in-school factors to have a more negative effect on hiring than non-Partnership school principals, with Cohort 1 principals perceiving the most negative effect. Second, principals in both cohorts reported a more positive influence of these factors in 2020-21 than in prior years. The improvement for Cohort 2 was steady over each of the two study years, while Cohort 1 dipped in 2019-20 and then rebounded in 2020-21. Third, by 2020-21, principal perceptions of in-school hiring factors were similar across Cohort 1, Cohort 2, and non-Partnership schools— again providing some evidence that improvements driven by the Partnership Model may be positively affecting teacher recruitment.[5]

However, the right panel of Figure 9.17 underscores continued challenges in Partnership schools. It is clear that principals in both cohorts of Partnership schools perceive out-of-school factors as more negative influences on hiring than principals of non-Partnership schools. These differences are largely driven by attendance and family background, which Partnership school principals rated as having negative effects on hiring and non-Partnership school principals rated as neutral to positive.

FIGURE 9.17. Principal Perceptions of Influence of In-School and Out-of-School Hiring Factors Over Time
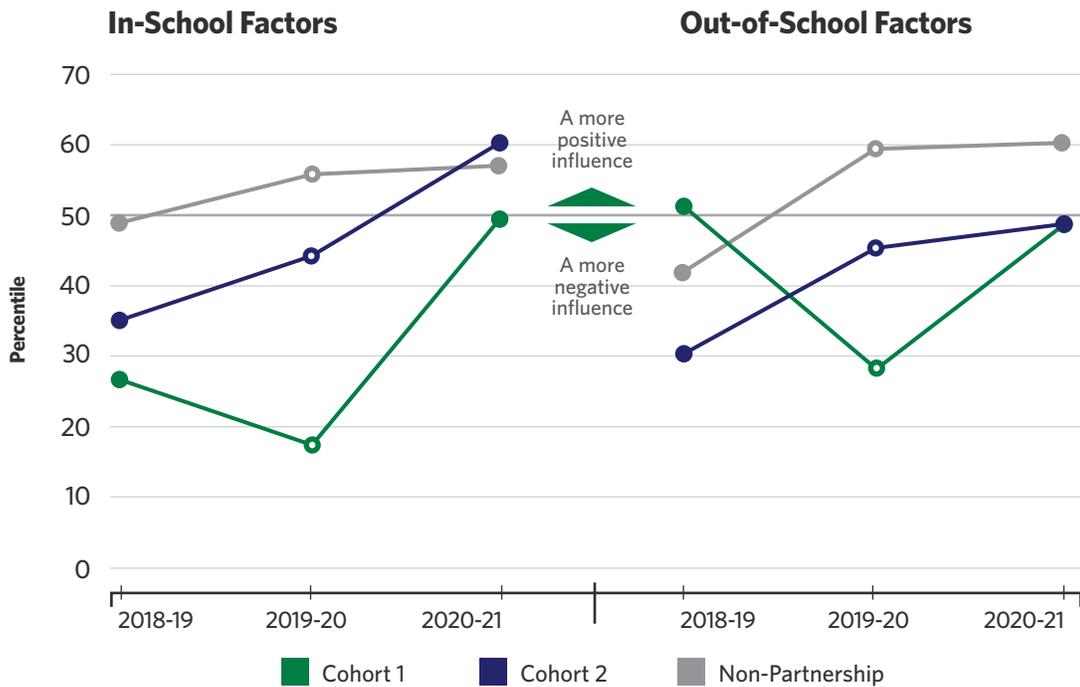
Note: Marker heights represent mean percentiles of Cohort 1, Cohort 2, and non-Partnership school principals on responses to items related to in-school and out-of-school hiring factors. The 50th percentile represents the average for all principals across each of the three survey waves. A mean response above the 50th percentile line indicates that a given group reported a more positive influence of in-school (first panel) or out-of-school (second panel) hiring factors than the average respondent across the three survey waves. A mean response below the 50th percentile line indicates that a given group reported a more negative influence of these factors.

We also observed differences by Partnership school status on two items not represented by these constructs. First, as in earlier years, Partnership school principals reported that their school's Partnership status had a negative effect on hiring, while non-Partnership school principals did not report the district's Partnership status played a role. Meanwhile, Partnership school principals reported that teacher salaries had less of a negative effect on hiring than non-Partnership school principals.

Charter school principals perceived hiring challenges to be more salient than TPS principals. Figure 9.18 illustrates these differences in the 2020-21 survey year, though these patterns hold across all three study years. Specifically, charter school principals perceived out-of-school factors to have a significantly more negative effect on hiring then TPS principals. Charter school principals also perceived in-school factors to have a slightly more negative effect, though this difference was not statistically significant.

FIGURE 9.18. Principal Perceptions of Influence of In-School and Out-of-School Hiring Factors by School Type
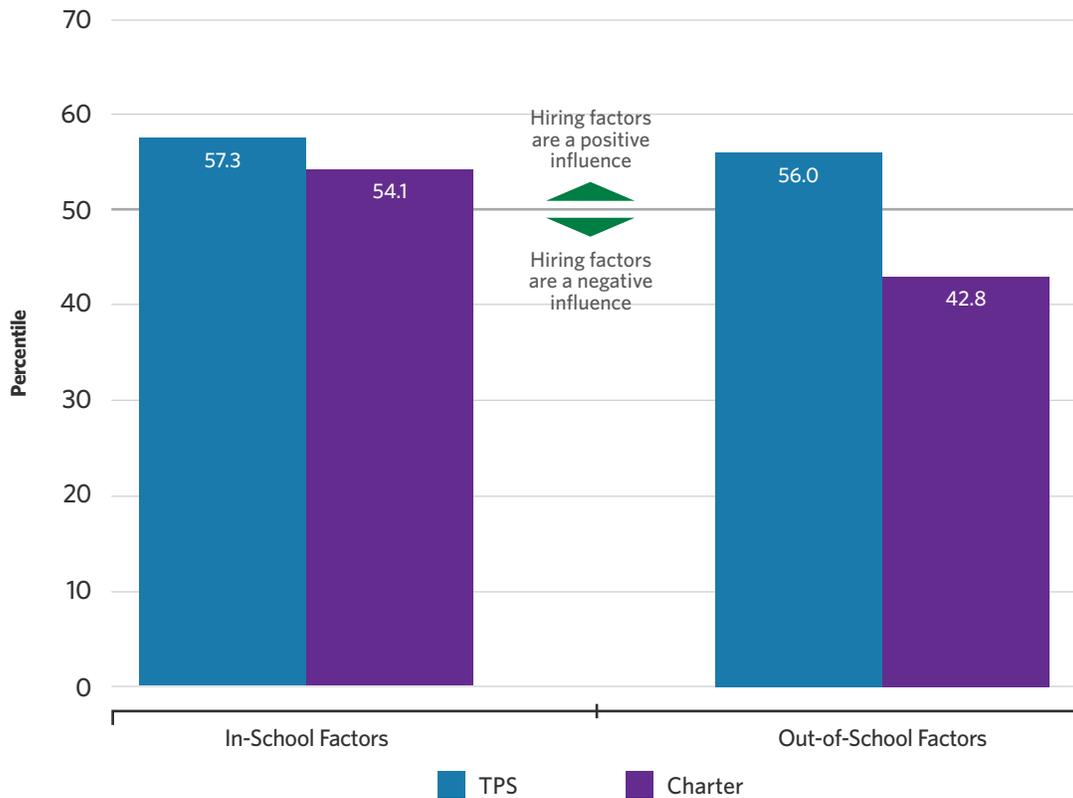
Note: Bar heights represent mean percentiles of TPS and charter school principals on responses to items related to in-school and out-of-school hiring factors. The 50th percentile represents the average for all principals across each of the three survey waves. A mean response above the 50th percentile line indicates that a given group reported a more positive influence of in-school (first panel) or out-of-school (second panel) hiring factors than the average respondent across the three survey waves. A mean response below the 50th percentile line indicates that a given group reported a more negative influence of these factors.

A Small Subset of Partnership Schools Rely Heavily on Long-Term Substitutes Rather than Permanent Teachers to Fill Regular Classroom Positions

While we do not have access to data on teacher vacancies, one possible proxy is schools' reliance on long-term substitutes to fill classroom positions. Based on previous years' study findings, in 2020-21 we asked principals to estimate the share of teachers in their school who are long-term substitutes (response options were <10%, 10-25%, 26-50%, 51-75%, 76-90%, and >90%). While the vast majority (about 9 in 10) reported that less than 10% of teachers were long-term substitutes, a small number reported a greater share of long-term substitutes. Specifically, approximately 5% of surveyed principals reported that 10-25% of their teachers were long-term substitutes and 3% reported 26-50% were long-term substitutes. Almost all of the principals reporting heavier reliance on long-term substitutes (and all reporting 26-50% long-term substitutes) were in Partnership schools. This finding highlights that while heavy reliance on long-term substitutes is not a sweeping challenge across all schools in Partnership districts, it is a substantial one for a small subset of Partnership schools.

Schools Were Less Focused on Hiring in the 2020-21 School Year Than in Prior Years

Perhaps because more educators reported planning to stay in their positions after the 2020-21 school year, schools in Partnership districts did not appear to increase their focus on hiring. In each of the three years under study, we asked teachers and principals about the extent to which teacher and administrator hiring and recruitment was a focus in their school. Figure 9.19 provides the share of educators in Partnership districts reporting that teacher and administrative hiring were major or primary foci in their school. The first panel indicates that over time, teachers became less likely to perceive both teacher and administrator hiring and recruitment as a major or primary focus. The second panel shows that principals followed a similar pattern around administrator hiring but perceived an increased focus on teacher hiring in the second year that sustained into 2020-21. It is clear from this figure that most educators did not consider hiring to be a major focus of their school in any year. In 2020-21, on average, teachers rated teacher hiring as a minor to moderate focus while principals tended to rate it as a moderate focus, and both teachers and principals rated administrator hiring as a minimal focus. Given that principals perceived hiring to be more of an emphasis than teachers, it is possible that principals are privy to more information than their teachers about their school's priorities. These trends are similar for Partnership and non-Partnership schools with one exception—the dip in hiring focus was less steep for Partnership schools, suggesting that Partnership schools may have maintained a stronger emphasis on hiring than other schools during the pandemic.

The survey data do not allow us to ascertain whether the decreased focus on hiring stems from having more educators intending to stay or from reduced capacity to focus on non-pandemic-related concerns. It is also possible that schools were less focused on hiring due to uncertainty about the 2021-22 school year budget at the time of the survey.

FIGURE 9.19. Partnership District Educator Reports of Teacher and Administrator Hiring Focus Over Time
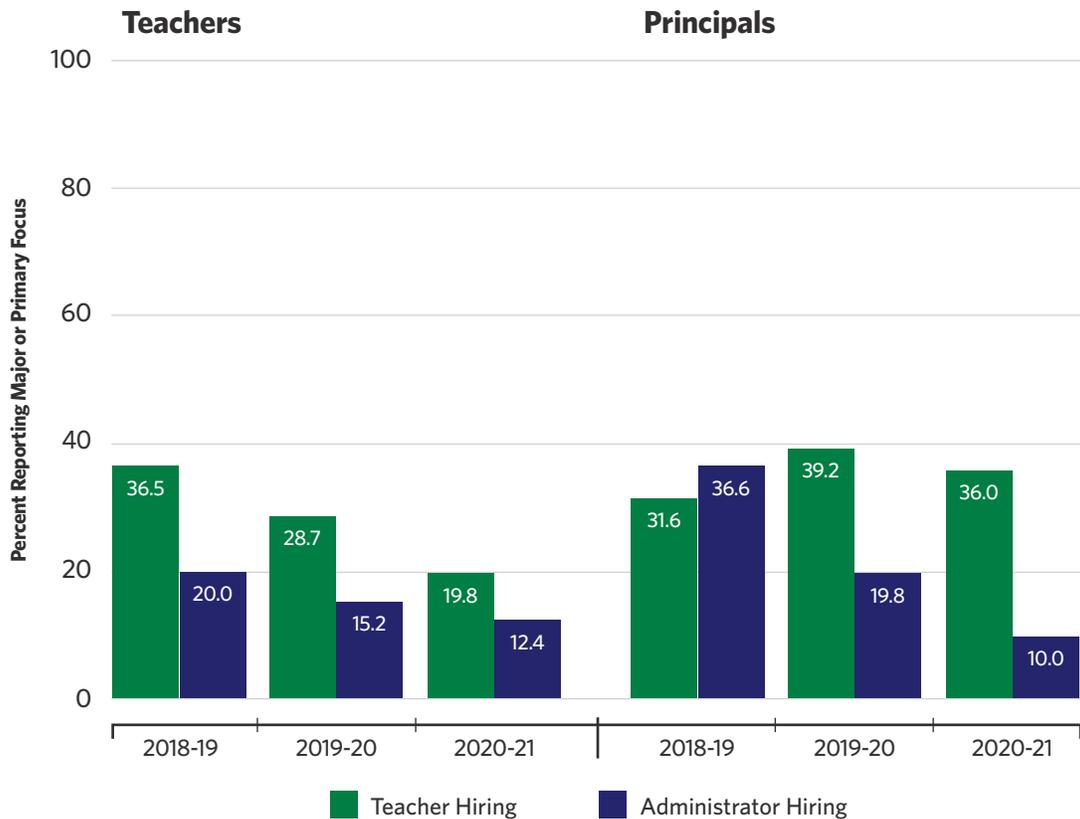
Note: Teachers and principals were asked about the extent to which teacher recruitment/hiring and administrator recruitment/hiring were a focus in their school. Response options were "not a focus," "a minor focus," "a moderate focus," "a major focus," and "a primary focus." Figure shows the share of teachers (left panel) and principals (right panel) reporting that these areas were a major or primary focus.

We also highlight trends on two other school focus areas related to human capital—professional development and teacher evaluation. Teachers across Partnership districts reported a decreased focus on professional development, from a moderate-to-major focus in 2019-20 to a moderate focus in 2020-21. Principals reported a stronger emphasis on professional development than teachers in both years but followed a similar declining trend. For both teachers and principals in 2020-21, professional development was a stronger focus in Partnership schools than on non-Partnership schools (a major focus for Partnership school principals and a moderate-to-major focus for Partnership school teachers).

Perceptions of school focus on teacher evaluation remained relatively stable even during the pandemic. We again find differences by Partnership school status, with both teachers and principals in Partnership schools reporting a stronger focus on teacher evaluation than their non-Partnership school peers. These findings suggest that Partnership districts, and Partnership schools in particular, continued to emphasize some components of human capital even as they scaled back their focus on hiring.

Partnership District Leaders Were Concerned About Teacher Shortages, Though Building-Level Educators Did Not Cite Teacher Supply as a Major Hindrance to Improvement

A variety of news stories have cautioned that the pandemic may exacerbate existing teacher shortages and create new ones—both nationally and in Michigan in particular (Cannizzaro, 2021; CBS News, 2021; Goldberg, 2021; Russell, 2021). While there is little evidence thus far that these fears have panned out on a large scale (Antonucci, 2021), existing teacher shortages tend to be more prevalent in low-performing schools such as Partnership schools (Aldeman et al., 2021; Dee & Goldhaber, 2017). It is therefore likely that even if nationwide or state-wide teacher shortages are not exacerbated by the pandemic, Partnership schools and districts may face more pronounced local shortages.

Partnership district and charter leaders shared that they experienced challenges in recruiting experienced, certified teachers. As in our first two reports, leaders believed the problem was in part driven by a shortage of teachers, especially compared with prior decades. For example, the district leader of Capitals said, "*The number of kids coming out of college with education degrees and teaching certificates is really low.*" The leader of Red Wings also attributed the teacher shortage and difficulties with recruiting to several issues mentioned in earlier years, including the reputation of teaching in society, the reputation of their district, and their current inability to pay competitively:

> *This teacher shortage, it's not because of Baby Boomers. It's because what I would call the decline or the degrading factor of being a teacher. Not having that aura of respect that used to be there when I came through... In our district, we do struggle. One, because we had a 30-year-old pay scale set up. We're working on changing that. Two, the reputation of our district is not the reality of our kids, so that hurts retention of people.*

Though less common, some larger districts that felt better able to address teacher pay were less concerned about recruitment, but still worried about teachers in high-needs areas. The district leader of Canadiens explained:

> *I do think we're going to be able to recruit. I'm mostly worried for special ed and special ed teachers, which will have a disproportionate negative impact on Partnership schools. We're are working on offering [bonuses] for special education teachers across the district in order to honestly recruit them from nearby districts... We're working on it. I think that'll help us fill any remaining gaps, but those are some things that I'm worried about moving forward.*

Others echoed these concerns and the idea that the shortage was especially pronounced when it came to teachers in areas like math and special education. Indeed, these perceptions align with data throughout the nation, which show that there are more likely to be shortages in hard-to-staff areas such as special education, math, and science (Carver-Thomas et al., 2021; Cowan et al., 2016; Dee & Goldhaber, 2017).

For instance, the leader of Oilers said, *"I think the hardest teacher area that there is to hire specifically now is math teachers, as well as special ed. Those have been the most difficult for us to get a candidate for."*

Of particular relevance to education leaders is the supply of certified teachers. High teacher turnover combined with a shallow applicant pool can lead schools to rely on uncertified teachers to fill vacancies. For example, the charter leader of the Hurricanes said:

> *Well, the issue with our teacher retention is we probably have, out of a staff of maybe a dozen teachers, probably three of them are certified or something. We don't have a huge amount that are certified. We have either non-certified teachers in these positions but regardless of whether they're certified or non-certified, the work is still the work.*

At the school level, while principals and teachers may have observed challenges related to hiring, they did not cite teacher shortages as a substantial hindrance to school improvement. In response to a question asking teachers and principals to rate a variety of factors on a scale of 1 to 5 from not a hindrance to the greatest hindrance, principals rated insufficient supply of certified teachers as a 2.1 (a minor hindrance) and principals as a 1.6 (between not a hindrance and a minor hindrance). We consider two possible explanations for the apparent disconnect between these responses and district leader perspectives. First, it is possible that educators this year viewed teacher shortages as a less immediate hindrance to school improvement due to their focus on pressing pandemic-related factors such as attendance, as we described in Section Six. Second, district leaders may have a more thorough or nuanced view of the teacher labor market than educators at the school level.

In summary, as in the first two reports, Partnership district leaders highlighted concerns about the teacher pipeline and teacher shortages. Specifically, leaders cited declining numbers of young people considering teaching, issues with pay and reputation, and even more difficulty hiring in specialized areas such as special education and math compared with other teaching positions. At the building level, educators perceived teacher supply as only a minor hindrance to school improvement—though concerns about teacher supply may have been usurped by more immediate day-to-day challenges related to COVID-19.

DAILY SUBSTITUTE TEACHERS

Even when schools fill positions with certified teachers, they can still face challenges related to teacher attendance. While teacher absenteeism is an underexplored topic in education research due to limitations around data availability, limited evidence suggests that teacher absenteeism and reliance on substitutes is higher in lower income areas like Partnership communities (Bruno, 2002). Teacher absenteeism may have been an even more pressing concern during the pandemic, as teachers grappled with health challenges, safety concerns, and child care and eldercare responsibilities during the school day.

Most Schools Struggled to Find Substitute Teachers—Especially Qualified Substitutes—When Teachers Were Absent

In the 2020-21 survey, we asked Partnership district principals to estimate the share of teachers who were absent each day and how often substitutes were available when needed. Figure 9.20 shows that, across Partnership districts, principals reported that about 6-18% of their teachers and 9-21% of other staff were absent each day. Responses were similar in non-Partnership schools in Partnership districts, and across the two cohorts.

FIGURE 9.20. Principal Reports of Estimated Teacher and Staff Absenteeism and Substitute Availability

Estimated Teacher and Staff Absenteeism

Teachers   5.9 ▮ 17.5

Other Staff   9.0 ▮ 21.4

0   10   20   30   40

Estimated Percent Absent Each Day

Estimated Availability of Substitute Teachers

Any Substitute Teachers   17.0 ▮ 28.8

High Quality Substitute Teachers   10.6 ▮ 22.4

0   10   20   30   40

Estimated Percent of Time Substitutes Are Available
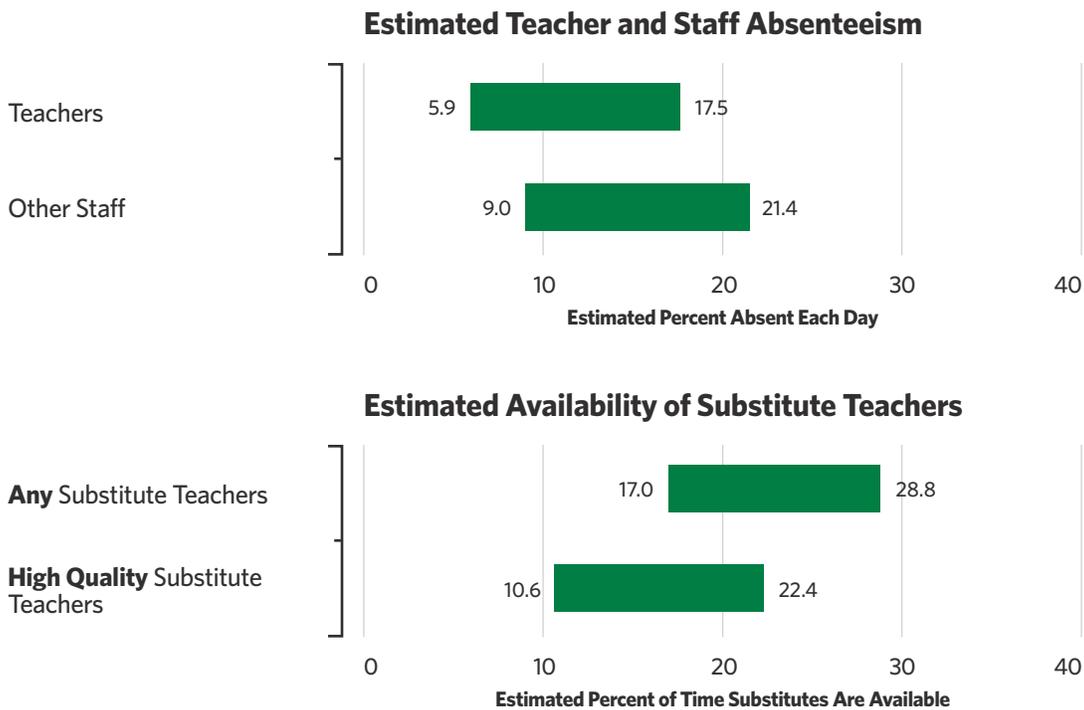
Note: The first set of bars provides estimated range of daily teacher absenteeism in February 2021 based on responses to the question, "Think about teacher and staff absences over the last month. Approximately what proportion of teachers and other staff were absent from school (for all or part of the day) each day?" Second set of bars provide estimated range of percent of time (high quality) substitute teachers were available to fill in for teachers who are absent based on responses to the question, "When teachers are absent, approximately what proportion of the time are..." (1) "substitute teachers available to teach their classes," and (2) "high quality substitute teachers available to teach their classes." Response options for both were <10%, 10-25%, 26-50%, 51-75%, 76-90%, and >90%. To create estimated ranges, we assign the minimum value of the selected response option as the lower bound and the maximum value as the upper bound. We then take the weighted mean of the lower and upper bounds, respectively, across all respondents. The figure to the left of each bar represents the estimated mean lower bound and the figure to the right of each bar represents the estimated mean upper bound. The first bar can therefore be interpreted as: principals in Partnership districts estimated that 5.9 to 17.5% of teachers were absent each day.

These averages, however, mask wide variation across schools. The modal response for both teacher and staff absences was <10%, with about two-thirds of principals reporting this lowest category, while a small subset of principals reported that absenteeism was more frequent. Specifically,

about 8% of principals estimated that more than one-quarter of their teachers were absent each day and about 17% of principals estimated that more than one-quarter of other staff were absent. These findings highlight that staff absenteeism was relatively low to moderate in most cases, but was a serious challenge for some schools.

When teachers are absent, district or school leaders typically need to identify coverage for the missed classes (though it is unclear how absences were handled under asynchronous instruction during COVID-19). To that end, the availability of substitute teachers—and high quality substitutes in particular—is critical to supporting student learning in the absence of the regular classroom teacher. The second panel of Figure 9.20 provides principal reports of substitute availability. Principals in Partnership districts estimated that when teachers were absent, substitute teachers were only available 17-29% of the time, and high quality substitutes were available even less often—11-22% of the time. Responses were similar across Partnership and non-Partnership schools and across cohorts.

The modal response for both items was <10%, indicating that when Partnership district teachers are absent, their schools are rarely—if ever—able to find substitute teachers to fill in for them. Very few principals (about 6%) reported that they were able to find substitutes more than 90% of the time. Schools were able to find high quality substitute teachers even less often.

When schools cannot identify substitutes, they need to find coverage from other sources, which may include other teachers and administrators. One teacher in the open survey responses highlighted that the shortage of substitutes can have cascading effects on other teacher workloads and mental health, noting:

> *The weight of the problem of not enough staff, shortness of staff/help, or lack of substitutes should not be put on teachers currently working to put off their own lives or mental health to avoid creating more of a shortness.*

A special education teacher noted that they have less bandwidth to support students with special needs because they have to fill in for teachers who are absent, *"Special Education teachers are being used as substitute teachers because there is no money to get subs. The shortened day and week has limited my ability to effectively service all of my students."* Reliance on special education teachers to cover general education classes may be especially troubling because, as we described in Section Three, educators were already reporting concerns that students with special needs were not receiving full services during the pandemic.

Despite the scarcity of substitute teachers, educators did not characterize substitute availability or quality as a major hindrance to achieving improvement goals. Figure 9.21 provides the share of teachers (first panel) and principals (second panel) who cited availability and quality of substitutes, respectively, as a great or the greatest hindrance to improvement. We show these figures across all respondents and then separately for Partnership and non-Partnership schools. We find that, across all schools in Partnership districts, fewer than 30% of teachers and principals characterized

availability or quality of substitutes as a great or the greatest hindrance to improvement. Moreover, educators in Partnership schools perceived these factors to be less serious hindrances than educators in non-Partnership schools.

FIGURE 9.21. Educator Perceptions of Substitute Availability and Quality as Hindrances to Improvement
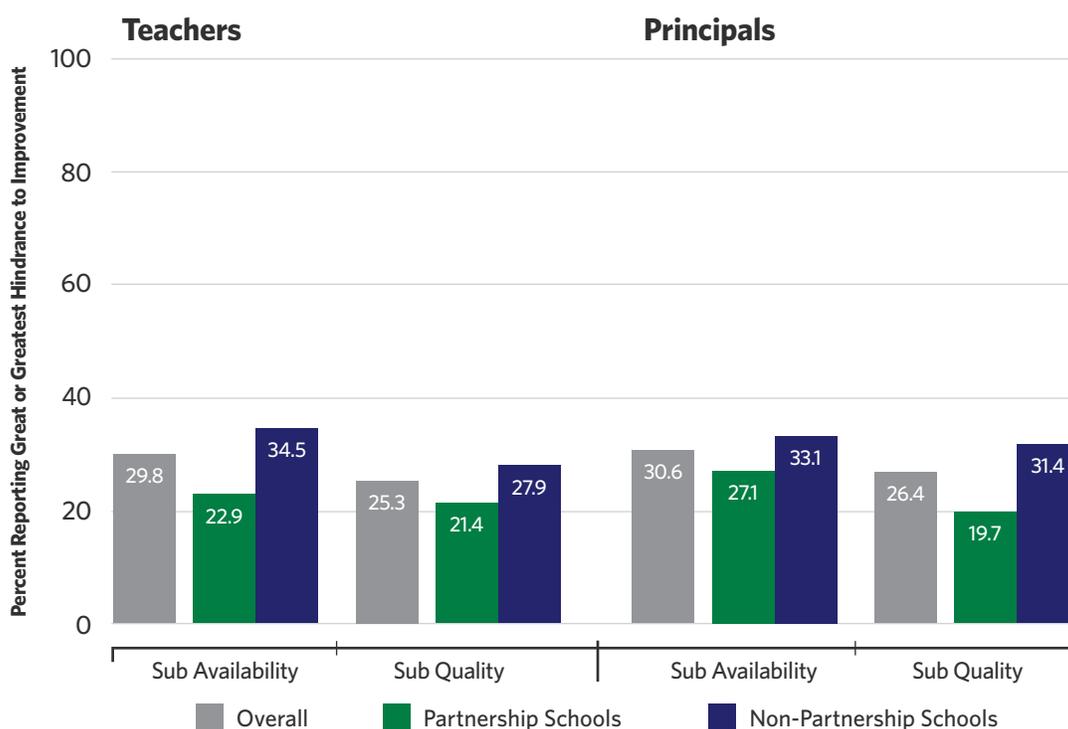
Note: Teachers and principals were asked about the extent to which substitute availability and quality were a hindrance to improvement goals. Response options were "not a hindrance," "a slight hindrance," "a moderate hindrance," "a great hindrance," and "the greatest hindrance." Figure shows the share of teachers (left panel) and principals (right panel) reporting that these areas were a great hindrance or the greatest hindrance.

In summary, widespread teacher absenteeism is a major challenge for a very small subset of schools in Partnership districts, but most Partnership schools reported difficulties finding substitutes—and particularly high-quality substitutes—when their teachers were absent. As a result, students may lose opportunities to learn and other teachers may lose preparation time because they have to cover classes of absent teachers. Despite the very small share of principals reporting availability of substitute teachers, educators did not view the lack of availability and quality of substitutes as major hindrances to school improvement.

SCHOOL LEADERSHIP

School leaders are a critical ingredient for successful school improvement. They play key roles in teacher retention, school climate, goal-setting and expectations, establishing and fostering collaborative processes, and making organizational decisions (Finnigan & Stewart, 2009;

Hallinger & Heck, 1998; Jacobson et al., 2005; Leithwood & Jantzi, 1990)—all factors that are particularly salient in low-performing schools like Partnership schools. Our findings above and in the Year Two Report provide additional evidence for the role of principals in teacher retention efforts, as teachers consistently ranked school leadership as a major factor in their decisions to stay in their roles.

School Leadership Was a Bright Spot in Partnership Districts and Especially Partnership Schools

To better understand teachers' perceptions of principal effectiveness, we asked teachers about their principal's effectiveness on a number of factors. Figure 9.22 provides the share of teachers in Partnership districts this year reporting that their principal performed each task either very effectively or extremely effectively. It is clear that the majority of teachers who responded to the survey perceived their principal to be effective. The largest share of teachers reported that their principal was very or extremely effective at communicating the central mission of the school (67%), while the smallest share felt their principal was very or extremely effective at working with staff to meet curriculum standards (57%).

FIGURE 9.22. Partnership District Teacher Perceptions of Principal Effectiveness

Factor	Percent
Communicate Central Mission of School	67.0
Encourage Parental Engagement	64.4
Use Evidence to Make Data-Driven Decisions	63.6
Facilitate and Encourage Professional Development	63.3
Communicate Improvement Goals	62.7
Work With Community Partners to Support School	60.9
Work With Staff to Meet Curriculum Standards	57.4

Percent Reporting Principal to be "Very" or "Extremely" Effective
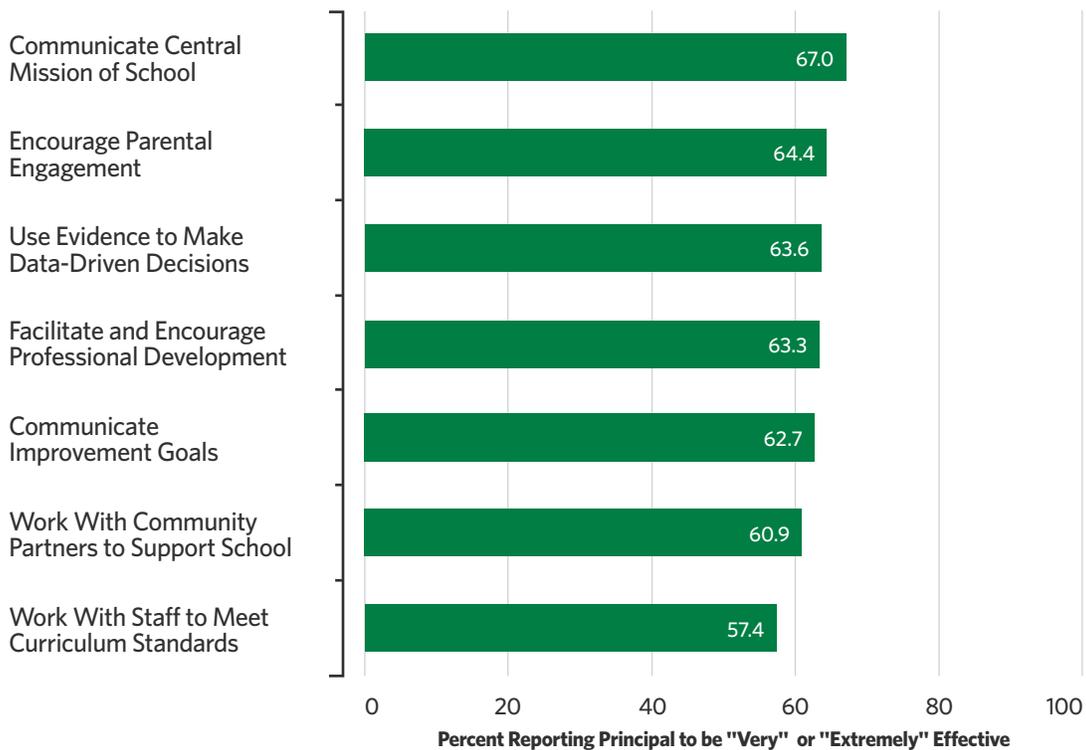
Note: Teachers were asked how effectively their principal or school leader performed each of the above. Response options were "not at all effectively," "slightly effectively," "somewhat effectively," "very effectively," and "extremely effectively." Bars represent the share of teachers in Partnership districts selecting very or extremely effective on a given item.

Figure 9.23 summarizes the items in the school leadership construct, which we use to unpack changes over time and differences across groups of teachers

FIGURE 9.23. School Leadership Construct

SCHOOL LEADERSHIP

How effectively principal:

Worked with staff to meet curriculum standards,
communicated central mission of school,
used evidence to make data-driven decisions,
worked with community partners,
facilitated professional development,
encouraged parent engagement,
communicated improvement goals and strategies with teachers

Figure 9.24 displays this construct over time for Cohort 1, Cohort 2, and non-Partnership schools, highlighting three main findings. First, teachers in both Cohorts 1 and 2 Partnership schools tended to rate their principals as more effective than teachers in non-Partnership schools across all study years. The one exception was Cohort 2 in the 2018-19 surveys, which teachers took shortly after Cohort 2 schools began Partnership. It may be the case that principals took some time to find their stride for leading turnaround schools, or that building trust between teachers and principals took time after schools began turnaround. Similar to our findings in Section Seven showing that awareness and buy-in of improvement goals grew after the first year of the intervention, this figure suggests that some factors related to school turnaround may take time.

Second, teachers across all three groups of schools gave their principals higher marks in 2020-21 than in previous years, again providing suggestive evidence that they felt supported by their principals during the pandemic and pointing to the potential for improved teacher retention. Of course, it is again possible that teachers were grading their principals more generously due to the pandemic. Finally, as we discussed in the Theory of Change in Section One, the Partnership Model aimed to improve the functioning of the school's instructional core. Improvements from the Partnership Model may have, as intended, led to improvements in school leadership across all schools in Partnership districts.

Teachers across all three groups of schools gave their principals higher marks in 2020-21.

FIGURE 9.24. Teacher Perceptions of Principal Effectiveness
Over Time by Cohort and Partnership Status
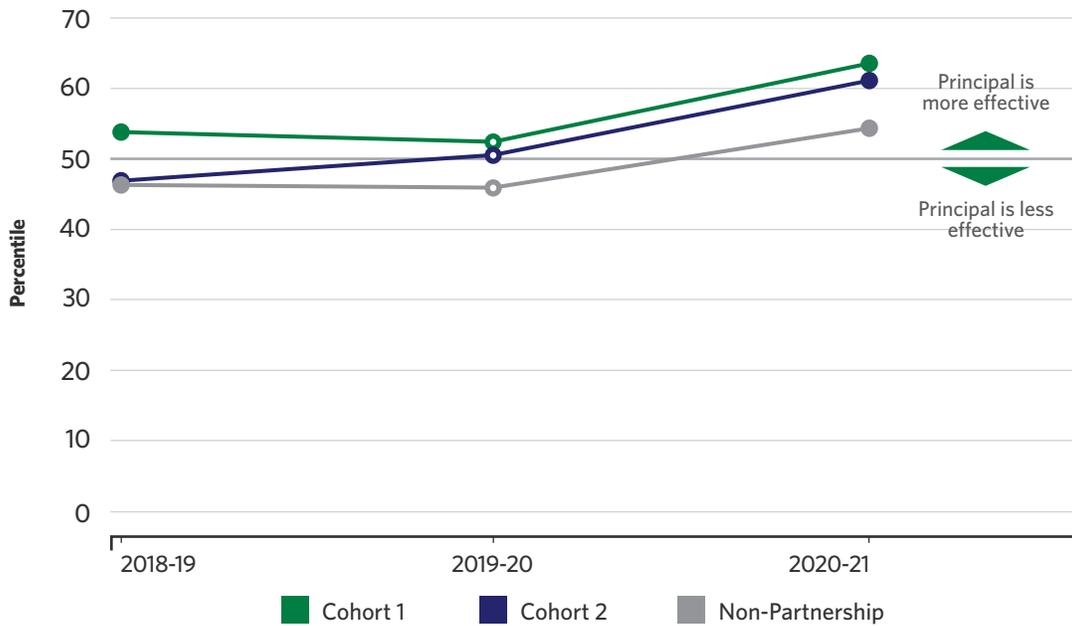
Note: Marker heights represent mean percentiles of Cohort 1, Cohort 2, and non-Partnership school teacher responses to items related to principal effectiveness. The 50th percentile represents the average for all teachers across each of the three survey waves. A mean response above the 50th percentile line indicates that a given group reported that their principal was more effective than the average teacher respondent across the three survey waves. A mean response below the 50th percentile indicates that a given group reported lower than average principal effectiveness.

While we do not have the data to say with certainty what drove perceptions of more effective school leadership, these findings suggest that Partnership schools are making positive strides with respect to school leadership that may improve other important factors for school turnaround, such as teacher retention and school culture and climate.

SUMMARY

A stable and highly effective teacher and principal workforce is key to successful turnaround. As we showed in the Year Two Report, Partnership schools and districts were making progress toward increasing staff stability—but there are concerns around the country that educator shortages may be exacerbated if the pandemic caused an exodus of certain subgroups of educators and a decreasing pipeline of new educators. While we found evidence that Cohort 1 teachers left the profession at increased rates in 2019-20, these exits were driven by early-career rather than retirement-eligible teachers. Increased exits were driven by Black teachers, an important distinction because there is considerable evidence that Black students fare better when they have Black teachers in their schools and classrooms.

While more Cohort 1 teachers left the profession in 2020-21 than in prior years, the share of teachers leaving their schools dipped slightly in both cohorts. A majority of both teachers and principals in Partnership districts reported that they were satisfied with their jobs, felt supported

during the pandemic, and intended to stay. By and large, they also perceived their principals to be highly effective. Together, these findings point to the possibility of slow but steady progress in the Partnership Model's aim to improve the stability and quality of Partnership educators. However, it is unclear whether there might be ripple effects of the COVID-19 pandemic on educator retention in Partnership schools and districts in future years. As the world recovers from the pandemic, it will be important to continue tracking human capital progress and challenges in Partnership schools and districts.

SECTION NINE NOTES

1. Only about 6% of the sample is retirement-eligible while the remainder are non-retirement eligible. Statistical significance depends on the precision of an estimate, and estimates are more precise when the sample is larger.

2. In findings drawing on survey data, the comparison group is non-Partnership schools in Partnership districts. In the remainder of the section, we refer to these schools as non-Partnership schools.

3. We assume this because teachers were given the option to mark multiple choices for their plans in the 2018-19 survey. If a teacher planned to leave her district, they might have marked that they planned to leave both their school and district, because leaving the district necessarily implies leaving the school. Similarly, if a teacher planned to leave the profession, they might have marked that they planned to leave their school, district, and the profession. On the other hand, a teacher whose position placed them in two separate schools may have selected that they planned to stay in their school and teach in a different school because both would be true.

4. Ideally, we would like to estimate event studies predicting principal turnover. We have not done so due to imprecise assignment codes for principals in the state administrative data. Inaccurate assignment codes would be especially problematic for estimating effect sizes due to the relatively small number of principals and schools.

5. In interpreting these results, we caution that the principal sample changed over time due to turnover and non-response. We therefore cannot say with certainty that these differences over time represent meaningful changes or differences in perceptions across principal and school samples.

**Partnership Turnaround:
Year Three Report**

SECTION TEN:
KEY TAKEAWAYS

EPIC

**Education Policy
Innovation Collaborative**

Section Ten:
Key Takeaways

This report is the third in our multi-year evaluation of the implementation and efficacy of the Partnership Model of school and district turnaround. This evaluation includes analyses of student and teacher mobility outcomes, graduation and dropout rates, district instructional modality data, district funding data, enrollment data, surveys of teachers and principals in both Partnership and non-Partnership schools in Partnership districts, interviews of Partnership district superintendents, and county-level data on COVID-19 transmission.

The objectives of this report are to provide an updated overview of Partnership Model implementation and outcomes in Partnership schools and districts across the state and to document how the COVID-19 pandemic has affected Partnership schools and districts as they work to support students and families during this unprecedented time. In this final section, we outline key takeaways and consider the implications of these results for future policymaking.

KEY TAKEAWAYS

The COVID-19 Pandemic Undercut Opportunities to Learn in Partnership Districts

- Students in Partnership districts faced higher levels of community transmission of COVID-19 and more deaths than students in other districts throughout the state. Teachers estimated that up to nearly half of their students had family members who contracted the virus and up to nearly 40% had immediate family members who contracted the virus.

- Students in Partnership districts grappled with the cascading effects of COVID-19, as teachers reported perceptions that a large share of their students faced major challenges related to health care and housing instability. Family economic challenges spilled into students' educational opportunities as students took on new child care responsibilities or jobs to contribute to their families' well-being. Challenges were especially prevalent in Cohort 1 schools, which were identified in 2016-17 after three straight years of a low-performing designation and have some of the highest rates of economic disadvantage and underrepresented minority students in the state.

- The effect of COVID-19 on Partnership communities and families reverberated in the classroom, as Partnership districts remained fully remote for a larger portion of the school year than non-Partnership districts (and in some cases the entire school year). Students and educators, in turn, grappled with resource gaps and other instructional challenges such as maintaining instructional continuity across remote and in-person modalities.

- Teachers believed that some students with special needs were especially challenged by the pandemic, perceiving that up to half did not receive the full services laid out in their Individualized Education Programs (IEPs). These perceptions align with research from throughout the country that have highlighted challenges providing an adequate education to exceptional children during the pandemic (Nelson, 2020). These challenges again were particularly pronounced in traditional public schools (TPSs). Future data collection should focus on understanding the efforts educators made to rectify challenges related to serving students with special needs and support student learning.

Educators in Partnership Districts Believe Students Began the 2020-21 School Year Behind on Academic Content Standards and Have Not Made Sufficient Progress to Close the Gap

- While there were no state accountability exams in the 2019-20 school year and we did not yet have data to analyze scores from 2020-21 exams at the time of writing, principals and teachers across school levels and subject areas largely reported that students did not begin the 2020-21 school year on-track. Even fewer believed that students would be proficient in content standards by the end of the school year.

Progress Toward Improving Graduation Rates in Cohort 1 High Schools Appears to Have Stalled Due to the Pandemic

- Over the first two years of Partnership, graduation rates in Cohort 1 schools ticked up in each year. However, in the third year of Cohort 1 implementation as COVID-19 took hold, graduation rates dropped back down to pre-identification levels. As we note above, Cohort 1 students contended with especially prevalent challenges related to the pandemic, which could have undermined progress in these schools in particular.

- Cohort 2 graduation and dropout rates remained relatively stable over each year of Partnership implementation.

In Low-Performing Schools in Michigan, Students Moved to New Schools and Districts at Lower Rates Than Previous Years but Left Public Schools Altogether at Higher Rates

- Across Partnership and a group of similarly low-performing comparison schools, the probability of student transfers out of their schools and districts decreased in 2019-20. However, the probability of students leaving Michigan public schools entirely increased.

- Cohort 1 students in particular were about 2 percentage points more likely to leave Michigan education in 2019-20 than in previous years and also more likely to leave than students in low-performing comparison schools.

Student Enrollment Decreased Across the State During the Pandemic, Though Declines in Partnership Schools Were Largely Concentrated in Kindergarten

- Kindergarten enrollment, which dropped across the state in 2020-21, made the steepest decline in Partnership schools, and in Cohort 1 schools in particular. Cohort 1 and 2 schools experienced 38% and 27% enrollment decreases respectively, while kindergarten enrollment declined by 30% in comparison schools and 11% in other schools throughout the state.

- Because Partnership districts rely more on state and federal funding sources, which are tied to enrollment, their funding is more sensitive to enrollment changes. State policy and federal emergency relief funds shielded schools from loss of funding in the 2020-21 school year, but Partnership district principals expressed concerns about future funding.

Student Absenteeism Emerged as an Especially Salient Challenge in Partnership Districts in 2020-21

- Educators reported high levels of student absenteeism and significant challenges serving students who did not attend. Absenteeism was especially high in Partnership schools, as Partnership school teachers estimated that up to 46% of students were absent each day and teachers in non-Partnership schools in Partnership districts estimated that up to 35% of students were absent each day.

- Educators expressed concerns that they and their schools would be held accountable for the learning of students who did not attend school during the pandemic.

The Partnership Model Continued its Evolution from a Sanctions-Based Accountability Policy to a Supportive Capacity-Building Intervention—Though Schools Continued to Monitor Accountability Goals During the Pandemic

- By summer of 2021, Office of Partnership Districts (OPD) leaned in further to Partnership as a supportive intervention, providing Cohort 1 districts with the option to remain in Partnership for an additional year or to exit. Districts elected to remain in Partnership in order to continue receiving Partnership supports and 21h funds. These decisions on the part of the state and districts further cemented Partnership as an intervention focused more on supports than sanctions, reflecting school turnaround policy across the country.

- Although district and charter leaders perceived Partnership as more supportive and less punitive, schools and districts continued to monitor progress toward goals even during the pandemic. Nearly 60% of teachers and one-quarter of principals in Partnership districts reported that their schools continued to monitor their accountability goals in the 2020-21 school year.

- Educators reported several challenges related to goal relevance and feasibility as well as ability to effectively monitor goals during the pandemic. A majority of educators felt goals were not feasible under current schooling conditions and an even larger majority felt that progress monitoring was inhibited by lack of data and educator limitations, respectively.

School Climate and Culture Appeared to Improve Over Time in Cohort 1 Schools, but Perceptions of Student Motivation and Parent Engagement Declined Across Partnership Districts

- School climate and culture appeared to improve somewhat in Partnership schools in the 2020-21 school year, with teachers and principals reporting that teachers have high expectations, a strong rapport with students, and that they and their colleagues share beliefs about the school's mission. They also reported fewer challenges related to behavioral management, which is perhaps unsurprising given the high rates of remote schooling.

- There were two elements of climate that dipped in the 2020-21 school year—student motivation and parent engagement. In particular, educators reported that students were less enthusiastic to learn than in prior years and a large majority of principals and teachers reported that low student motivation and a lack of parental engagement were great hindrances to school improvement. Parent engagement may have been a particular challenge in 2020-21 due to the largely virtual format of schooling as well as the disproportionate effect of the pandemic on Partnership communities.

The Share of Teachers Leaving Their Schools and Districts Dipped Slightly in 2020-21—Especially in Cohort 2—Though More Cohort 1 Teachers Left the Profession

- Partnership teachers continued to leave their schools and districts at higher rates than other teachers throughout the state, though Cohort 2 showed signs of progress. Specifically, Cohort 2 teachers were 3.6 percentage points less likely to leave their schools in 2019-20 than in the identification year. This reduction was driven by teachers in DPSCD Cohort 2 schools.

- Across the Cohort 1 and 2 samples of low-performing schools, teachers were 4-5 percentage points more likely to exit the profession in 2019-20 than in prior years. Cohort 1 Partnership school teachers were an additional 4.4 percentage points more likely to exit than comparison school teachers. This increase in exits was driven by teachers in DPSCD Cohort 1 schools.

- Exits from the profession were concentrated among less experienced and Black teachers. The former finding highlights concerns related to teacher shortages. The latter raises concerns about education for Black students in particular, who make up 80-90% of students in Partnership schools and who benefit in the shorter and longer term from Black educators.

- More teachers and principals reported plans to stay in their current roles than in the prior year. These improvements may stem in part from increased job satisfaction among teachers in Partnership districts, who largely reported that they felt supported by their

administrations during the pandemic. Educators who may have felt more supported by their administrations may have been more inclined to stay in their roles. Alternately, they may have been staying and waiting out the pandemic before making career moves.

School Leadership Continued to be a Bright Spot in Partnership Districts

- Teachers largely reported that their principals were effective school leaders. Reports of principal effectiveness increased over time and were higher in Partnership schools than in non-Partnership schools in Partnership districts.

POLICY IMPLICATIONS

State and Local Policymakers Will Need to Focus on Accelerating Learning in the 2021-22 School Year and Beyond

While educators and students made extraordinary efforts to teach and learn during the pandemic, they contended with immense challenges both inside and outside of the classroom. Few Partnership district educators believed their students were on track to meet academic content standards by the end of the 2020-21 school year, suggesting educators and students will need ample support to accelerate learning moving forward. MDE has already begun to make resources available to educators to support accelerated learning efforts. Educators in Partnership districts noted that student absenteeism was an even greater challenge during the pandemic, and they perceived that student motivation to learn decreased. Thus, students in Partnership schools and districts are likely to enter the 2021-22 school year substantially behind academically, and there will need to be additional efforts made to accelerate learning and to meet students where they are to help them succeed.

Students in Partnership Districts Will Need Supports Beyond Academics

While academic growth is a core focus of the Partnership Model, our findings suggest that students in Partnership districts will need robust socioemotional and resource supports. During 2020 and 2021, they experienced high rates of family illness, lived in communities with high death rates, and experienced other trauma related to COVID-19. They assumed new responsibilities to support their families and lost time in school and with peers. Several researchers and advocates suggest embedding socioemotional and trauma-informed practices into student learning (e.g., Darling-Hammond & Hyler, 2020). Districts could invest relief funds in high quality professional development for educators to implement trauma-informed practices and infuse socioemotional learning into their lesson plans and daily routines (Srinivasan, 2019). As educators and students return to in-person schooling, providing them with the necessary tools to cope with trauma and build resilience will be critical to accelerate learning and close the opportunity gap for students in Partnership schools.

Continued Funding and Support Will Be Critical to Help Partnership Schools and Other Low-Performing Schools and Districts Meet the Academic and Socioemotional Needs of Students

The academic and socioemotional challenges that have been accentuated for students in Partnership schools and districts during the pandemic will require additional supports and funding to address. In addition, Partnership schools lost even more kindergarten enrollment than other schools throughout the state—an especially salient issue for Partnership schools because they rely more on per-pupil allocations from the state and federal governments than more affluent districts throughout the state. A growing literature documents the benefit of per pupil funding for school and district improvement—and the potential hazards of funding declines (e.g., Jackson et al., 2016; Jackson et al., 2021)—and these resources will be particularly important in coming years.

There Need to be Increased Efforts to Recruit and Retain Teachers—and Especially Black Teachers—in Lower Performing Schools and Districts

Partnership teachers continued to leave their schools and districts at higher rates than other teachers throughout the state, though there were some signs of progress in Cohort 2 in particular. However, across the sample of low-performing schools, teachers—especially novice and Black teachers—were substantially more likely to exit the profession in 2019-20 than in prior years. Although more educators reported plans to stay in their current roles for the 2021-22 school year, it is unclear the extent to which this is a pandemic blip or a true shift in trajectory. Either way, policymakers at both state and local levels will need to continue to focus on educator recruitment and retention efforts, especially into low-performing schools and districts.

KEY TERMS

1. **21h Funding:** 21h is a grant the Michigan Legislature appropriates and the Office of Partnership Districts administers at the Michigan Department of Education. Partnership districts are eligible to apply for 21h funding to support the implementation of their Partnership Agreement.

2. **CEPI (Center for Educational Performance and Information):** The Center for Educational Performance and Information collects and manages Michigan's educational administrative data such as records on the state's teachers, students, and facilities.

3. **CSI (Comprehensive Support and Improvement):** Under the Every Student Succeeds Act (ESSA, see entry below), all states are required to identify the bottom 5% of schools as Comprehensive Support and Improvement schools. The first round of CSI schools were identified in 2017-18. In Michigan, the first round of CSI schools is Partnership Round 3. These are the schools that were in the bottom 5 percentiles on the state school index system in the 2016-17 school year.

4. **Extended COVID-19 Learning (ECOL) Plan Monthly Questionnaire:** Under Return to Learn legislation, a series of three bills signed into law on August 20, 2020, each district in Michigan was required to develop an extended continuity of learning (ECOL) plan including a description of instructional modality (e.g., in-person, remote) during the 2020-21 school year. After submitting the initial ECOL plan, districts were required to reconfirm the mode of instructional delivery each month.

5. **ESSA (Every Student Succeeds Act):** Passed in 2015, the federal Every Student Succeeds Act (ESSA) is the most recent reauthorization of the Elementary and Secondary Education Act, which outlines the federal government's education policies.

6. **IEP (Individualized Education Program):** An individualized education program (IEP) is a written document for students with disabilities ages 3 through 25 that outlines the student's educational needs and goals and any programs and services the intermediate school district (ISD) and/or its member district will provide to help the student make educational progress.

7. **ISD/RESA (Intermediate School District/Regional Educational Service Agency):** In Michigan, ISDs/RESAs are educational entities that operate between the Michigan Department of Education and local education agencies, often serving the local education agencies within a given county. Local education agencies can receive a range of services through their ISD.

8. **LEA (Local Education Agency):** A local education agency (LEA) is an entity that operates a public school. Local education agencies can be traditional public school districts or charter schools/networks.

9. **MDE (Michigan Department of Education):** The Michigan Department of Education (MDE) is Michigan's state education agency.

10. **M-STEP (Michigan Student Test of Educational Progress):** A suite of assessments administered to Michigan's students since Spring 2015. M-STEP is the assessment that the Michigan Department of Education uses for school and district accountability.

11. **Non-Partnership School:** Non-Partnership schools are schools within Partnership districts that have not been identified as Partnership schools themselves.

12. **OPD (Office of Partnership Districts):** The Office of Partnership Districts (OPD) is a unit within the Michigan Department of Education that identifies, supports, and evaluates Partnership districts.

13. **Partnership Agreement:** After being identified as a Partnership district, a local education agency works to develop a Partnership Agreement that guides its turnaround reform. This document identifies the district's strengths and weaknesses, sets 18- and 36-month improvement goals, outlines strategies to help the district achieve those goals, lays out consequences for failing to achieve improvement goals, and describes how a range of external partners will support the district to achieve these goals.

14. **Partnership Agreement Liaison:** Partnership Agreement liaisons are employed by the Office of Partnership Districts but work with Partnership districts themselves to support the implementation of their Partnership Agreements.

15. **Partnership District:** Local education agencies that operate a Partnership school automatically become a Partnership district and must develop a Partnership Agreement to improve student outcomes in the identified school(s).

16. **Partnership Model:** The Partnership Model is Michigan's plan for accountability, support, and improvement under the Every Student Succeeds Act. Under the Partnership Model, districts that operate the state's lowest-performing schools develop and implement a plan to turn them around over a three-year period.

17. **Partnership School:** A low-performing school that has been identified for Partnership.

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KEY TERMS *(continued)*

18. **Priority Schools:** This designation applied to the lowest five percent of schools statewide in terms of performance through the 2016-2017 school year.

19. **PSAT (Preliminary Scholastic Aptitude Test):** The College Board's Preliminary Scholastic Aptitude Test (PSAT) 8/9 is a baseline college readiness assessment that the state administers to eighth graders to meet the federal accountability requirement for ELA and math assessment.

20. **RGA (Review of Goal Attainment):** A process that occurs after 18 months of Partnership implementation in which representatives from the LEA, MDE, the ISD, and community partners meet to evaluate progress toward the 18-month benchmarks spelled out in the Partnership Agreement and determine whether the LEA may need additional monitoring and/or support to meet its 36-month goals.

21. **SAT (Scholastic Aptitude Test):** The Scholastic Aptitude Test (SAT) is an assessment of college readiness. In Michigan, all 11th graders take the SAT as part of the Michigan Merit Examination.

22. **TPS (Traditional Public School) Districts:** Traditional Public School (TPS) Districts are special-purpose districts with geographic boundaries and a publicly elected governing board that receive public funds to operate schools.

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APPENDIX A: PARTNERSHIP DISTRICTS AND SCHOOLS

District	Round	School	Exited Partnership?
American International Academy	2	American International Academy - Elementary	
Baldwin Public Schools	3	Baldwin Junior High School	
Battle Creek Public Schools	2	Ann J. Kellogg School	
	2	Northwestern Middle School	
Benton Harbor Area Schools	1	Dream Alternative Academy School of Choice	District exited summer 2018 via a Cooperative Agreement with MDE
	1	International Academy at Hull	
	1	STEAM Academy at MLK	
	2	Benton Harbor High School	
Bridgeport-Spaulding Community School District	1	Martin G. Atkins Elementary School	
David Ellis Academy	2	David Ellis Academy	
Detroit Delta Preparatory Academy for Social Justice	3	Detroit Delta Preparatory Academy for Social Justice	Closed by board
Detroit Leadership Academy	3	Detroit Leadership Academy Middle/High	
Detroit Public Safety Academy	3	Detroit Public Safety Academy	
Detroit Public Schools Community District	1	Ann Arbor Trail Magnet School	
	1	Bow Elementary-Middle School	
	1	Burns Elementary-Middle School	
	1	Clark, J.E. Preparatory Academy	
	1	Denby High School	
	1	Detroit Collegiate Preparatory High School	
	1	Detroit Institute of Technology at Cody	Closed by district
	1	Durfee Elementary-Middle School	
	1	Fisher Magnet Upper Academy	
	1	Ford High School	
	1	Gompers Elementary-Middle School	
	1	Henderson Academy	
	1	Law Elementary School	
	1	Marquette Elementary-Middle School	
	1	Mary McLeod Bethune Elementary-Middle School	
	1	Mason Elementary School	
	1	Mumford High School	
	1	Osborn Academy of Mathematics	
	1	Osborn College Preparatory Academy	Closed by district
	1	Osborn Evergreen Academy of Design and Alternative Energy	Closed by district
	1	Pershing High School	
	1	Sampson Academy	

District	Round	School	Exited Partnership?
Detroit Public Schools Community District (continued)	1	Southeastern High School	
	1	Thirkell Elementary School	
	2	Blackwell Institute	
	2	Brewer Elementary-Middle School	
	2	Carstens Elementary-Middle School	
	2	Central High School	
	2	Cody Academy of Public Leadership	Closed by district
	2	Detroit International Academy for Young Women	
	2	Dixon Elementary School	
	2	Dossin Elementary-Middle School	
	2	Earhart Elementary-Middle School	
	2	East English Village Preparatory Academy	
	2	Edward "Duke" Ellington @ Beckham	
	2	Emerson Elementary-Middle School	
	2	Greenfield Union Elementary-Middle School	
	2	King High School	
	2	King, John R. Academic and Performing Arts	
	2	Mackenzie Elementary-Middle School	
	2	Mann Elementary School	
	2	Marshall, Thurgood Elementary School	
	2	Neinas Dual Language Learning Academy	
	2	Noble Elementary-Middle School	
	2	Palmer Park Preparatory Academy	
	2	Pulaski Elementary-Middle School	
	2	Schulze Elementary-Middle School	
	2	Wayne Elementary School	
	3	A. Philip Randolph Technical High School	Closed by district
	3	Brenda Scott Academy for Theatre Arts	
	3	Brown, Ronald Academy	
	3	Carleton Elementary School	
	3	Cody High	
	3	Douglass Academy for Young Men	
	3	Eastside Detroit Lions Academy	
	3	Fisher Magnet Lower Academy	
	3	Gardner Elementary School	
	3	Garvey Academy	
	3	Mark Twain Elementary-Middle School	

District	Round	School	Exited Partnership?
Detroit Public Schools Community District (continued)	3	Medicine and Community Health Academy	
	3	Nichols Elementary-Middle School	
	3	Robeson Academy, Malcolm X Academy	
Eastpointe	1	Eastpointe Middle School	Released from Partnership status in the summer of 2020 by the Office of Partnership Districts
Ecorse Public Schools	3	Ecorse Community High School	
El-Hajj Malik El-Shabazz Academy	3	El Hajj Malik El-Shabazz Academy	Closed by board
Flint Community Schools	3	Accelerated Learning Academy	
	3	Doyle Ryder Elementary	
	3	Durant-Tuuri-Mott Elementary	
	3	Eisenhower School	
	3	Freeman School	
	3	Holmes STEM Academy	
	3	Neithercut Elementary	
	3	Northwestern High School (Flint)	Closed by district
	3	Pierce School	
	3	Potter School	
	3	Scott School	
	3	Southwestern Classical Academy	
Frederick Douglass International Academy	3	Frederick Douglass International Academy	Closed by board
GEE Edmonson Academy	3	GEE Edmonson Academy	Closed by board
Genessee STEM Academy	3	Genessee STEM Academy	
Grand Rapids Public Schools	3	Alger Middle School	
Great Lakes Academy	3	Great Lakes Academy	
Insight School of Michigan	3	Insight School of Michigan	
Joy Preparatory Academy	3	Joy Preparatory Academy	
Kalamazoo	1	Washington Writers' Academy	District released from Partnership status in the summer of 2020 by the Office of Partnership Districts
	1	Woodward School for Technology and Research	
Lansing	2	Attwood Elementary	District released from Partnership status in the summer of 2020 by the Office of Partnership Districts
	2	Gardner International Academy	
	2	J.W. Sexton High School	
	2	North School	
	2	Woodcreek Achievement Center	
Macomb Montessori Academy	3	Macomb Montessori Academy	

District	Round	School	Exited Partnership?
Mildred C. Wells Preparatory Academy	2	Mildred C. Wells Preparatory Academy	
Muskegon Heights Public Schools Academy System	1	Muskegon Heights Academy	
	2	Dr. Martin Luther King Academy	
Oakland County Academy of Media & Technology (formerly Sarah J. Webber Media Arts Academy)	3	Oakland County Academy of Media & Technology (formerly Sarah J. Webber Media Arts Academy)	
Pontiac	1	Pontiac High School	
	1	Whitman Elementary School	
	2	Owens Elementary School	
	2	Pontiac Middle School	Exited April 2020 by district request
River Rouge	1	Ann Visger Preparatory Academy	
	1	CB Sabbath 6-8 Preparatory Academy	
Saginaw	1	Jesse Loomis School	
	1	Saginaw High School	
	2	Jesse Rouse School	
Saginaw Preparatory Academy	3	Saginaw Preparatory Academy	
Southwest Detroit Community School	3	Southwest Detroit Community School	Closed by board
University Preparatory Academy Art and Design (formerly Henry Ford Academy)	2	University Preparatory Art & Design – Elementary (formerly Henry Ford Academy: School for Creative Design)	
Wayne-Westland Community School District	2	Hoover Elementary School	Closed by district
William C. Abney Academy	3	William C. Abney Academy Elementary	

APPENDIX B: FACTOR LOADING TABLES

This appendix provides tables of confirmatory factor analysis (CFA) loadings and Cronbach's alphas for all constructs described in Table 2.3 of Section 2 and used throughout the report. In each table, we summarize the question item in the first column, provide the factor loading for the item in the second column, and provide the psi in the third column. The factor loading represents the extent to which the item loads onto the factor, where higher values indicate that the item is more highly correlated with the factor. The psi indicates the portion of the item that is not correlated with the factors, where higher values indicate that a larger share of the variation in the item is uncorrelated with the factor.

The Cronbach's alpha at the bottom of each table provides a measure of internal consistency of the factor, with higher values indicating higher internal consistency. The N provides the number of responses that contributed to the factor.

The table note provides the full question text and the response choices. While the rows provide only a summary of the question item text, the full text is provided in Appendix B.

SECTION THREE—COVID-19

TABLE B.1. Health Care and Housing		
	Factor loading	Psi
Access to healthcare	0.820	0.328
Mental health	0.839	0.297
Access to mental health care	0.871	0.241
Food insecurity	0.780	0.392
Homelessness or housing instability	0.754	0.432
Cronbach's alpha	0.867	
N	1,177	

NOTE: *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," or "the greatest challenge." Question asked to teachers only in the 2020-21 survey wave only. We highlight that this construct represents teacher perceptions of student health care and housing and there is necessarily uncertainty in the measure.*

TABLE B.2. Economic and Attendance Challenges		
	Factor loading	Psi
Lost socialization opportunities with peers	0.671	0.549
Parent/guardian job loss, unemployment, lost wages, furlough	0.777	0.396
Parent/guardians have jobs as a front-line worker	0.733	0.462
New childcare responsibilities	0.738	0.456
Inability of students to attend school consistently	0.677	0.542
Cronbach's alpha	0.754	
N	1,413	

NOTE: *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," or "the greatest challenge." Question asked to teachers only in the 2020-21 survey wave only. We highlight that this construct represents teacher perceptions of student economic and attendance challenges and there is necessarily uncertainty in the measure.*

TABLE B.3. Illness

	Factor loading	Psi
Immediate family members contracted COVID-19	0.855	0.270
Other family members contracted COVID-19	0.809	0.346
Students contracted COVID-19	0.800	0.360
Students suffer from continued symptoms of COVID-19	0.775	0.400
Learning loss due to health issues from COVID-19	0.718	0.485
Socioemotional trauma as a result of COVID-19	0.595	0.646
Cronbach's alpha	0.829	
N	798	

NOTE: Teachers were asked, "In this school year, approximately what proportion of your students have experienced each of the following as a result of COVID-19?" Response options were <10%, 10-25%, 26-50%, 51-75%, 76-90%, >90%, or "not sure." "Not sure" responses were excluded from analysis. Question asked to teachers only in the 2020-21 survey wave only. We highlight that this construct represents teacher perceptions of the student experience with illness related to COVID-19 and there is necessarily uncertainty in the measures.

TABLE B.4. Student Learning Resources

	Factor loading	Psi
Students have reliable internet access	0.730	0.468
Students have other tech resources they need to learn	0.626	0.608
Students have other non-tech resources they need to learn	0.681	0.537
Students have parents/ guardians who can assist as needed	0.748	0.440
Students have a place to learn	0.783	0.387
My students have access to food for all meals daily	0.637	0.594
Cronbach's alpha	0.789	
N	2,163	

NOTE: Teachers were asked, "We are interested in understanding how the COVID-19 pandemic and shifts in schooling due to the pandemic have impacted instruction for you, your students, and your school. To what extent do you agree with each of the following statements?" Response options were "strongly disagree," "disagree," "neither agree nor disagree," "agree," or "strongly agree." Question asked to teachers only in the 2020-21 survey wave only. We highlight that this construct represents teacher perceptions of student learning resources and there is necessarily uncertainty in the measure.

TABLE B.5. Instructional Resources

	Factor loading	Psi
Have data and information to target instruction	0.844	0.287
Have resources to adequately serve students	0.784	0.386
Able to educate students at least as well as prior years	0.786	0.383
Cronbach's alpha	0.727	
N	2,180	

NOTE: Teachers were asked, "We are interested in understanding how the COVID-19 pandemic and shifts in schooling due to the pandemic have impacted instruction for you, your students, and your school. To what extent do you agree with each of the following statements?" Response options were "strongly disagree," "disagree," "neither agree nor disagree," "agree," or "strongly agree." Question asked to teachers only in the 2020-21 survey wave only.

TABLE B.6. Classroom Instructional Challenges

	Factor loading	Psi
Emotional connections with students	0.959	0.080
Building trust with students	0.959	0.080
Cronbach's alpha	0.912	
N	2,171	

NOTE: Teachers were asked, "To what extent have each of the following been challenges for you in the classroom this school year?" Response options were "not a challenge," "a minor challenge," "a moderate challenge," "a major challenge," or "the greatest challenge." Question asked to teachers only in the 2020-21 survey wave only.

TABLE B.7. Student-Teacher Relations

	Factor loading	Psi
In-person classroom management	0.497	0.753
Online classroom management	0.691	0.522
Maintaining instructional continuity across modalities	0.719	0.484
Communicating with families	0.637	0.594
Access to supplementary materials	0.679	0.539
Educating students with disabilities	0.682	0.534
Cronbach's alpha	0.729	
N	2,089	

NOTE: Teachers were asked, "To what extent have each of the following been challenges for you in the classroom this school year?" Response options were "not a challenge," "a minor challenge," "a moderate challenge," "a major challenge," or "the greatest challenge." Question asked to teachers only in the 2020-21 survey wave only.

SECTION SEVEN—ACCOUNTABILITY

TABLE B.8. School Academic Focus		
	Factor loading	**Psi**
Curriculum and instructional programs	0.692	0.521
Assessments	0.683	0.534
Data-driven instruction	0.825	0.319
Academic improvement for cusp	0.820	0.327
Academic improvement for special populations	0.742	0.449
Cronbach's alpha	0.809	
N	6,431	

NOTE: Teachers and principals were asked, "In the 2020-21 school year, to what extent are each of the following areas a focus in your school?" Response options were "not a focus," "a minor focus," "a moderate focus," "a major focus," or "a primary focus." Question asked to teachers and principals in all three survey waves.

TABLE B.9. COVID-19 Accountability Concerns		
	Factor loading	**Psi**
Personal accountability for absent students	0.899	0.192
School accountability for absent students	0.910	0.173
Personal accountability for learning loss	0.899	0.191
School accountability for learning loss	0.907	0.178
Cronbach's alpha	0.924	
N	2,380	

NOTE: Teachers and principals were asked, "Please indicate the extent to which you have concerns about each of the following at your school." Response options were "not a concern," "minimal concern," "moderate concern," "major concern," or "primary concern." Question asked to teachers and principals in the 2020-21 survey wave only.

SPECIAL SECTION B—EDUCATOR PERCEPTIONS OF PARTNERSHIP

TABLE B.10. Awareness of and Buy-In to Improvement Goals		
	Factor loading	**Psi**
Aware of and understand goals	0.718	0.484
Goals are feasible	0.806	0.350
Goals focus on most important issues facing school	0.854	0.270
Goals help meet needs of students	0.865	0.252
Have resources we need to accomplish goals	0.656	0.570
Clear and concrete steps to improve student outcomes	0.824	0.321
Efforts align with goals	0.815	0.335
Cronbach's alpha	0.897	
N	7,619	

NOTE: Teachers and principals were asked, "Please indicate the extent to which you agree or disagree with the following statements about your organization's improvement goals." Response options were "strongly disagree," "disagree," "neither agree nor disagree," "agree," or "strongly agree." Question asked to teachers and principals in all three survey waves.

SECTION EIGHT—CLIMATE AND CULTURE

TABLE B.11. Positive Climate and Culture		
	Factor loading	**Psi**
Meet academic needs	0.766	0.414
Teachers have strong rapport with students	0.782	0.388
Teachers have high expectations for students	0.805	0.352
Students enthusiastic to come to school	0.698	0.513
Cronbach's alpha	0.751	
N	6,994	

NOTE: Teachers and principals were asked, "Please indicate the extent to which you agree or disagree with the following statements about your school." Response options were "strongly disagree," "disagree," "neither agree nor disagree," "agree," or "strongly agree." Question asked to teachers and principals in all three survey waves.

SECTION NINE—HUMAN CAPITAL

TABLE B.12. In-School Hiring Challenges		
	Factor loading	**Psi**
Ability to offer PD/support	0.559	0.688
Climate and culture	0.878	0.228
Academic performance	0.852	0.274
Student discipline	0.859	0.263
Cronbach's alpha	0.814	
N	229	

NOTE: Principals were asked, "To what extent do the following factors affect your ability to recruit and hire teachers in your school?" Response options were "very negatively impacts," "somewhat negatively impacts," "does not impact," "somewhat positively impacts," or "very positively impacts." Question asked to principals only in all three survey waves.

TABLE B.13. Out-of-School Hiring Challenges		
	Factor loading	**Psi**
Student attendance	0.813	0.340
Family background	0.882	0.223
Community socioeconomic status	0.855	0.269
Geography	0.771	0.406
Cronbach's alpha	0.856	
N	222	

NOTE: Principals were asked, "To what extent do the following factors affect your ability to recruit and hire teachers in your school?" Response options were "very negatively impacts," "somewhat negatively impacts," "does not impact," "somewhat positively impacts," or "very positively impacts." Question asked to principals only in all three survey waves.

TABLE B.14. School Leadership		
	Factor loading	**Psi**
Work with staff to meet curriculum standards	0.899	0.192
Communicate central mission of the school	0.897	0.195
Use evidence to make data-driven decisions	0.897	0.196
Work with community partners	0.871	0.241
Facilitate and encourage PD	0.886	0.216
Encourage parental engagement	0.868	0.246
Cronbach's alpha	0.945	
N	6,102	

NOTE: Teachers were asked, "Consider your school's current principal or school leader. Please indicate how effectively your principal or school leader performed each of the following." Response options were "not at all effectively," "slightly effectively," "somewhat effectively," "very effectively," or "extremely effectively." Question asked to teachers only in all three survey waves.

APPENDIX C: REGRESSION RESULTS

This appendix provides tables of regression coefficients for each of the event study models shown in the text of the report. For student- and teacher-level models on the unrestricted sample of students, we show overall results and then separate results within and outside of Detroit Public Schools Community District (DPSCD). For school-level models, we show only overall results due to limited numbers of treatment and comparison schools within DPSCD.

SECTION FOUR—STUDENT OUTCOMES

TABLE C.1. Estimated Effects on On-Time Graduation Rate and Dropout Rate				
	Cohort 1		Cohort 2	
	(1)	(2)	(3)	(4)
	On Time Grad.	HS Dropout	On Time Grad.	HS Dropout
2013- 14	-0.044* (0.021)	-0.012 (0.023)	-0.042* (0.017)	0.005 (0.015)
2014- 15	-0.029 (0.021)	0.004 (0.018)	-0.042* (0.019)	0.010 (0.014)
2015- 16	-0.008 (0.021)	-0.025 (0.016)	-0.064** (0.020)	0.019 (0.013)
2016-17	ref.	ref.	-0.045** (0.016)	0.012 (0.014)
2017- 18	-0.034 (0.031)	0.021 (0.030)	ref.	ref.
2018-19	-0.028 (0.020)	0.011 (0.022)	0.010 (0.011)	-0.007 (0.013)
2019- 20	0.017 (0.036)	-0.011 (0.029)	0.041** (0.015)	-0.020 (0.014)
Partnership School 2013- 14	0.040 (0.034)	0.029 (0.032)	0.002 (0.036)	-0.006 (0.031)
Partnership x 2014-15	0.058 (0.037)	-0.014 (0.028)	-0.018 (0.033)	0.002 (0.025)
Partnership x 2015-16	-0.004 (0.031)	0.035[+] (0.020)	0.005 (0.023)	-0.000 (0.025)
Partnership x 2016-17	ref.	ref.	0.010 (0.023)	-0.006 (0.022)
Partnership x 2017-18	0.055 (0.039)	-0.021 (0.039)	ref.	ref.
Partnership x 2018-19	0.057 (0.043)	-0.008 (0.036)	-0.016 (0.031)	0.004 (0.033)
Partnership x 2019-20	-0.036 (0.064)	0.021 (0.045)	-0.037 (0.035)	-0.007 (0.031)
Constant	0.465 (0.664)	0.440 (0.429)	0.509** (0.180)	0.331* (0.129)
School covariates	X	X	X	X
N	248	248	589	589
Adjusted R^2	0.851	0.759	0.884	0.723
Within R^2	0.197	0.107	0.169	0.069

NOTE: All models contain year indicators, year x treatment indicators, time-variant school-level student demographics (ED, EL, special ed, Black, Hispanic, other non-White, logged enrollment), and school fixed effects, with robust standard errors clustered by school.
[+] $p<0.10$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$

	Cohort 1			Cohort 2		
TABLE C.2. Estimated Effects on Student Mobility, by Cohort (Overall)						
	(1)	(2)	(3)	(4)	(5)	(6)
	Left school	Left district	Left MI ed	Left school	Left district	Left MI ed
2013-14	0.024* (0.011)	0.015 (0.011)	0.012 (0.009)	0.013 (0.009)	0.006 (0.009)	-0.006 (0.009)
2014-15	0.019** (0.007)	0.012* (0.006)	0.008 (0.006)	0.016+ (0.009)	0.011 (0.008)	-0.003 (0.008)
2015-16	0.012 (0.009)	0.008 (0.008)	0.002 (0.006)	0.005 (0.009)	0.002 (0.009)	-0.004 (0.009)
2016-17	ref.	ref.	ref.	0.007 (0.010)	0.004 (0.010)	-0.008 (0.009)
2017-18	0.016 (0.015)	0.019 (0.015)	0.026 (0.016)	ref.	ref.	ref.
2018-19	0.013 (0.012)	0.005 (0.009)	0.008 (0.006)	0.003 (0.008)	-0.001 (0.007)	-0.011 (0.007)
2019-20	-0.089*** (0.010)	-0.080*** (0.009)	-0.001 (0.007)	-0.106*** (0.009)	-0.097*** (0.008)	-0.022** (0.008)
Partnership x 2013-14	-0.015 (0.016)	-0.009 (0.014)	-0.019+ (0.011)	-0.007 (0.011)	0.001 (0.010)	0.004 (0.008)
Partnership x 2014-15	-0.012 (0.013)	-0.006 (0.010)	-0.013 (0.009)	-0.007 (0.013)	0.006 (0.011)	0.003 (0.008)
Partnership x 2015-16	0.009 (0.013)	0.008 (0.011)	-0.004 (0.007)	0.008 (0.013)	0.010 (0.010)	0.003 (0.009)
Partnership x 2016-17	ref.	ref.	ref.	-0.003 (0.014)	0.006 (0.011)	0.009 (0.009)
Partnership x 2017-18	-0.008 (0.017)	-0.019 (0.016)	-0.024 (0.016)	ref.	ref.	ref.
Partnership x 2018-19	-0.013 (0.014)	-0.002 (0.011)	-0.007 (0.006)	-0.000 (0.011)	0.002 (0.009)	0.007 (0.007)
Partnership x 2019-20	-0.045** (0.017)	0.012 (0.012)	0.020** (0.008)	-0.044** (0.014)	0.016 (0.011)	0.028** (0.010)
Constant	0.165 (0.189)	0.153 (0.181)	-0.066 (0.186)	0.181 (0.133)	0.007 (0.115)	-0.130 (0.094)
Structural mover indicator	X	X	X	X	X	X
School covariates	X	X	X	X	X	X
Student covariates	X	X	X	X	X	X
Grade FE	X	X	X	X	X	X
N	377,342	377,342	377,342	642,281	642,281	642,281
Adjusted R^2	0.121	0.106	0.077	0.126	0.113	0.115
Within R^2	0.080	0.062	0.031	0.089	0.073	0.042

NOTE: All models contain year indicators, year x treatment indicators, time-variant and invariant student demographics (ED, EL, special ed, male, Black, Hispanic, other non-White), time-variant school variables (ED, EL, special ed, Black, Hispanic, other non-White, logged enrollment), grade level fixed effects, and school fixed effects. All models include an indicator for structural moves. + $p<0.10$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$

	Detroit only			No Detroit		
TABLE C.3. Estimated Effects on Student Mobility, Cohort 1 (by DPSCD)						
	(1)	(2)	(3)	(4)	(5)	(6)
	Left school	Left district	Left MI ed	Left school	Left district	Left MI ed
2013-14	0.041** (0.012)	0.015 (0.009)	-0.001 (0.007)	0.020+ (0.011)	0.016 (0.012)	0.014 (0.010)
2014-15	0.061** (0.019)	0.034** (0.012)	0.000 (0.008)	0.015+ (0.008)	0.010 (0.007)	0.009 (0.006)
2015-16	0.033* (0.013)	0.015 (0.011)	-0.006 (0.006)	0.010 (0.010)	0.008 (0.009)	0.003 (0.006)
2017-18	0.000 (0.013)	0.003 (0.009)	0.000 (0.009)	0.020 (0.017)	0.022 (0.018)	0.030 (0.018)
2018-19	0.046 (0.043)	0.016 (0.021)	0.000 (0.012)	0.012 (0.014)	0.003 (0.010)	0.010 (0.007)
2019-20	-0.092*** (0.022)	-0.046*** (0.011)	0.014 (0.011)	-0.087*** (0.011)	-0.085*** (0.010)	-0.003 (0.009)
Partnership x 2013-14	-0.028 (0.018)	-0.001 (0.012)	-0.007 (0.007)	-0.021 (0.018)	-0.023+ (0.014)	-0.015 (0.009)
Partnership x 2014-15	-0.053* (0.022)	-0.020 (0.014)	-0.007 (0.009)	-0.009 (0.019)	-0.011 (0.014)	-0.006 (0.011)
Partnership x 2015-16	-0.020 (0.016)	0.007 (0.014)	0.004 (0.007)	0.024 (0.022)	0.001 (0.011)	-0.004 (0.007)
Partnership x 2017-18	-0.002 (0.015)	-0.009 (0.011)	-0.003 (0.009)	0.001 (0.022)	-0.015 (0.019)	-0.022 (0.018)
Partnership x 2018-19	-0.057 (0.043)	-0.020 (0.022)	-0.006 (0.012)	-0.001 (0.018)	0.009 (0.014)	-0.001 (0.006)
Partnership x 2019-20	-0.075** (0.026)	-0.019 (0.014)	0.016 (0.012)	0.016 (0.021)	0.010 (0.019)	-0.000 (0.008)
Constant	0.019 (0.713)	-0.294 (0.415)	-0.328 (0.220)	0.148 (0.254)	0.199 (0.248)	-0.073 (0.282)
Structural mover indicator	X	X	X	X	X	X
School covariates	X	X	X	X	X	X
Student covariates	X	X	X	X	X	X
Grade FE	X	X	X	X	X	X
N	119,598	119,598	119,598	257,744	257,744	257,744
Adjusted R^2	0.117	0.065	0.033	0.124	0.124	0.100
Within R^2	0.084	0.049	0.020	0.081	0.071	0.041

NOTE: All models contain year indicators, year x treatment indicators, time-variant and invariant student demographics (ED, EL, special ed, male, Black, Hispanic, other non-White), time-variant school variables (ED, EL, special ed, Black, Hispanic, other non-White, logged enrollment), grade level fixed effects, and school fixed effects. All models include an indicator for structural moves. + $p<0.10$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$

	Detroit only			No Detroit		
TABLE C.4. Estimated Effects on Student Mobility, Cohort 2 (by DPSCD)						
	(1)	(2)	(3)	(4)	(5)	(6)
	Left school	Left district	Left MI ed	Left school	Left district	Left MI ed
2013-14	0.024+ (0.013)	0.014+ (0.007)	-0.001 (0.003)	0.014 (0.010)	0.006 (0.010)	-0.006 (0.010)
2014-15	0.028+ (0.015)	0.022** (0.007)	0.005 (0.004)	0.016+ (0.010)	0.011 (0.010)	-0.004 (0.009)
2015-16	0.021 (0.014)	0.019* (0.008)	-0.001 (0.005)	0.004 (0.010)	0.001 (0.010)	-0.005 (0.010)
2016-17	0.003 (0.012)	0.006 (0.007)	0.004 (0.004)	0.007 (0.011)	0.005 (0.011)	-0.008 (0.010)
2018-19	0.033 (0.033)	0.005 (0.015)	0.005 (0.005)	0.000 (0.008)	-0.002 (0.008)	-0.013+ (0.008)
2019-20	-0.106*** (0.019)	-0.030*** (0.007)	0.036*** (0.009)	-0.107*** (0.010)	-0.107*** (0.009)	-0.030*** (0.009)
Partnership x 2013-14	-0.021 (0.016)	-0.010 (0.009)	-0.006 (0.004)	-0.007 (0.015)	0.007 (0.014)	0.012 (0.011)
Partnership x 2014-15	-0.020 (0.019)	-0.007 (0.010)	-0.011* (0.004)	-0.009 (0.019)	0.009 (0.015)	0.010 (0.010)
Partnership x 2015-16	-0.003 (0.015)	-0.004 (0.008)	-0.003 (0.004)	0.001 (0.019)	0.008 (0.013)	0.005 (0.011)
Partnership x 2016-17	0.013 (0.017)	0.008 (0.010)	-0.007 (0.005)	-0.015 (0.019)	0.002 (0.014)	0.014 (0.011)
Partnership x 2018-19	-0.023 (0.033)	0.002 (0.016)	-0.006 (0.005)	-0.008 (0.015)	-0.003 (0.012)	0.007 (0.010)
Partnership x 2019-20	-0.056* (0.022)	-0.026* (0.010)	-0.007 (0.010)	-0.028 (0.021)	-0.004 (0.014)	0.008 (0.010)
Constant	0.475* (0.235)	0.044 (0.159)	-0.111 (0.141)	0.174 (0.156)	-0.008 (0.131)	-0.163 (0.109)
Structural mover indicator	X	X	X	X	X	X
School covariates	X	X	X	X	X	X
Student covariates	X	X	X	X	X	X
Grade FE	X	X	X	X	X	X
N	179,607	179,607	179,607	462,674	462,674	462,674
Adjusted R^2	0.100	0.049	0.017	0.137	0.132	0.138
Within R^2	0.078	0.040	0.014	0.096	0.086	0.054

NOTE: All models contain year indicators, year x treatment indicators, time-variant and invariant student demographics (ED, EL, special ed, male, Black, Hispanic, other non-White), time-variant school variables (ED, EL, special ed, Black, Hispanic, other non-White, logged enrollment), grade level fixed effects, and school fixed effects. All models include an indicator for structural moves.
+ $p<0.10$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$

SPECIAL SECTION A—PARTNERSHIP AND THE LOWEST ACHIEVING STUDENTS

	TABLE C.5. Estimated Effects on M-Step by Prior Achievement Level, Cohort 1							
	MATH				ELA			
	Bottom quartile		Top 3 quartiles		Bottom quartile		Top 3 quartiles	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Level	Delta	Level	Delta	Level	Delta	Level	Delta
2013-14	0.204* (0.098)	0.051 (0.130)	-0.732*** (0.094)	-0.897*** (0.084)	0.208* (0.083)	-0.063 (0.110)	-0.847*** (0.074)	-0.901*** (0.088)
2014-15	0.174* (0.068)	-0.010 (0.091)	-0.623*** (0.072)	-0.755*** (0.068)	0.148** (0.056)	-0.082 (0.077)	-0.690*** (0.060)	-0.739*** (0.070)
2015-16	0.207*** (0.044)	0.177** (0.063)	-0.401*** (0.040)	-0.415*** (0.040)	0.207*** (0.038)	0.151* (0.059)	-0.415*** (0.036)	-0.386*** (0.042)
2017-18	0.511*** (0.035)	0.747*** (0.058)	0.149*** (0.029)	-0.045 (0.042)	0.512*** (0.038)	0.783*** (0.060)	0.191*** (0.028)	0.012 (0.044)
2018-19	0.704*** (0.060)	0.527*** (0.090)	0.392*** (0.051)	0.279*** (0.064)	0.712*** (0.063)	0.597*** (0.086)	0.470*** (0.052)	0.344*** (0.066)
Partnership x 2013-14	0.157* (0.071)	0.095 (0.084)	0.095 (0.057)	0.113* (0.052)	0.102+ (0.058)	0.084 (0.068)	0.102 (0.065)	0.026 (0.054)
Partnership x 2014-15	0.054 (0.057)	-0.007 (0.061)	0.021 (0.051)	-0.046 (0.054)	-0.010 (0.049)	-0.019 (0.061)	-0.033 (0.055)	-0.136** (0.045)
Partnership x 2015-16	0.057 (0.046)	0.022 (0.058)	0.015 (0.034)	0.015 (0.043)	0.068+ (0.039)	0.129* (0.062)	0.021 (0.036)	0.061 (0.057)
Partnership x 2017-18	0.092* (0.045)	0.183* (0.076)	0.028 (0.037)	0.089+ (0.053)	0.102** (0.036)	0.195** (0.062)	0.051 (0.033)	0.087+ (0.045)
Partnership x 2018-19	0.126* (0.055)	0.096 (0.066)	0.052 (0.049)	0.074 (0.051)	0.093* (0.045)	0.079 (0.050)	0.102* (0.042)	0.070 (0.045)
Constant	-1.233*** (0.192)	0.363+ (0.213)	0.391+ (0.223)	1.282*** (0.208)	-1.296*** (0.174)	0.397+ (0.232)	0.417** (0.135)	1.156*** (0.171)
School covariates	X	X	X	X	X	X	X	X
Student covariates	X	X	X	X	X	X	X	X
Grade FE	X	X	X	X	X	X	X	X
N	16,095	16,095	52,642	52,642	15,903	15,903	53,052	53,052
Adjusted R^2	0.411	-0.063	0.684	-0.185	0.418	-0.030	0.703	-0.191
Within R^2	0.189	0.148	0.032	0.037	0.213	0.166	0.035	0.030

NOTE: Prior achievement measured in identification year. Bottom quartile (Cols 1-2) are those in the bottom quartile of their school in the identification year. Top 3 quartiles (Cols 3-4) are those above the 25th percentile of their school in the identification year. Sample restricted to students in schools with at least four students taking the exam in the identification year. $^+ p<0.10,$ $^* p<0.05,$ $^{**} p<0.01,$ $^{***} p<0.001$

	MATH				ELA			
TABLE C.6. Estimated Effects on M-Step by Prior Achievement Level, Cohort 2								
	Bottom quartile		Top 3 quartiles		Bottom quartile		Top 3 quartiles	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Level	Delta	Level	Delta	Level	Delta	Level	Delta
2013-14	-0.058 (0.110)	-0.200[+] (0.115)	-0.973[***] (0.087)	-0.735[***] (0.082)	-0.008 (0.108)	-0.015 (0.120)	-1.120[***] (0.079)	-0.848[***] (0.095)
2014-15	-0.017 (0.089)	-0.154 (0.094)	-0.785[***] (0.069)	-0.642[***] (0.073)	0.057 (0.081)	-0.008 (0.091)	-0.905[***] (0.061)	-0.675[***] (0.075)
2015-16	0.037 (0.060)	0.009 (0.063)	-0.575[***] (0.047)	-0.459[***] (0.047)	0.126[*] (0.054)	0.122[*] (0.062)	-0.653[***] (0.041)	-0.463[***] (0.050)
2016-17	0.209[***] (0.034)	0.237[***] (0.042)	-0.360[***] (0.026)	-0.294[***] (0.027)	0.211[***] (0.031)	0.235[***] (0.040)	-0.388[***] (0.026)	-0.280[***] (0.032)
2018-19	0.532[***] (0.031)	0.834[***] (0.043)	0.149[***] (0.025)	-0.057[+] (0.032)	0.495[***] (0.028)	0.759[***] (0.039)	0.190[***] (0.022)	-0.024 (0.035)
Partnership x 2013-14	0.113[*] (0.055)	0.067 (0.064)	0.049 (0.050)	0.038 (0.043)	0.007 (0.060)	-0.024 (0.061)	0.040 (0.049)	0.026 (0.048)
Partnership x 2014-15	-0.005 (0.053)	-0.062 (0.059)	-0.031 (0.050)	-0.080 (0.051)	-0.033 (0.051)	-0.028 (0.059)	-0.056 (0.050)	-0.107[+] (0.059)
Partnership x 2015-16	0.038 (0.038)	0.079 (0.048)	-0.025 (0.036)	0.007 (0.038)	-0.012 (0.036)	0.037 (0.037)	-0.003 (0.040)	0.052 (0.035)
Partnership x 2016-17	0.073[*] (0.033)	0.081 (0.053)	0.023 (0.029)	0.047 (0.036)	0.022 (0.032)	0.035 (0.044)	0.029 (0.032)	0.042 (0.040)
Partnership x 2018-19	0.075[**] (0.026)	0.123[*] (0.048)	0.021 (0.021)	0.040 (0.036)	0.054[**] (0.021)	0.073[+] (0.042)	0.005 (0.018)	0.026 (0.039)
Constant	-1.244[***] (0.158)	0.240 (0.172)	0.242[+] (0.137)	0.776[***] (0.128)	-1.255[***] (0.148)	0.056 (0.146)	0.279[+] (0.147)	0.865[***] (0.146)
School covariates	X	X	X	X	X	X	X	X
Student covariates	X	X	X	X	X	X	X	X
Grade FE	X	X	X	X	X	X	X	X
N	27,060	27,060	90,992	90,992	26,308	26,308	91,984	91,984
Adjusted R^2	0.334	-0.047	0.643	-0.170	0.326	-0.041	0.666	-0.182
Within R^2	0.173	0.165	0.037	0.030	0.166	0.169	0.036	0.021

NOTE: Prior achievement measured in identification year. Bottom quartile (Cols 1-2) are those in the bottom quartile of their school in the identification year. Top 3 quartiles (Cols 3-4) are those above the 25th percentile of their school in the identification year. Sample restricted to students in schools with at least four students taking the exam in the identification year. [+] p<0.10, [*] p<0.05, [**] p<0.01, [***] p<0.001

SECTION NINE—HUMAN CAPITAL

	TABLE C.7. Estimated Effects on Teacher Mobility, by Cohort (Overall)					
	Cohort 1			Cohort 2		
	(1)	(2)	(3)	(4)	(5)	(6)
	Left school	Left district	Left MI ed	Left school	Left district	Left MI ed
2013-14	0.012 (0.022)	0.009 (0.021)	0.003 (0.011)	-0.012 (0.016)	-0.035* (0.014)	-0.003 (0.009)
2014-15	0.020 (0.019)	0.005 (0.014)	0.000 (0.009)	-0.020 (0.017)	-0.024 (0.015)	-0.005 (0.009)
2015-16	0.007 (0.018)	-0.007 (0.014)	0.005 (0.009)	-0.020 (0.015)	-0.020 (0.014)	-0.010 (0.008)
2016-17	ref.	ref.	ref.	-0.024+ (0.014)	-0.017 (0.012)	-0.012 (0.008)
2017-18	0.007 (0.016)	0.012 (0.014)	0.019* (0.008)	ref.	ref.	ref.
2018-19	0.013 (0.016)	0.014 (0.015)	0.010 (0.009)	0.005 (0.015)	0.007 (0.014)	0.007 (0.008)
2019-20	-0.032 (0.022)	-0.014 (0.020)	0.040** (0.013)	-0.010 (0.017)	-0.010 (0.014)	0.051*** (0.010)
Partnership x 2013-14	0.022 (0.037)	0.027 (0.034)	0.054** (0.019)	-0.006 (0.028)	0.040+ (0.023)	0.018 (0.014)
Partnership x 2014-15	0.011 (0.038)	0.009 (0.026)	0.024 (0.019)	-0.019 (0.027)	0.003 (0.023)	-0.001 (0.013)
Partnership x 2015-16	0.011 (0.032)	0.017 (0.025)	0.031+ (0.017)	0.016 (0.028)	0.028 (0.023)	0.014 (0.012)
Partnership x 2016-17	ref.	ref.	ref.	-0.019 (0.026)	0.006 (0.020)	0.006 (0.012)
Partnership x 2017-18	-0.016 (0.034)	-0.042 (0.025)	-0.007 (0.014)	ref.	ref.	ref.
Partnership x 2018-19	0.053 (0.038)	0.025 (0.028)	0.024 (0.018)	0.023 (0.024)	0.010 (0.020)	0.020 (0.014)
Partnership x 2019-20	0.025 (0.030)	0.036 (0.027)	0.044* (0.020)	-0.026 (0.026)	0.012 (0.022)	-0.002 (0.016)
School Closed	-0.242*** (0.030)	-0.168*** (0.019)	-0.095*** (0.024)	-0.359*** (0.045)	-0.321*** (0.045)	-0.113*** (0.021)
Constant	0.764* (0.330)	0.568* (0.260)	0.148 (0.157)	0.667** (0.240)	0.338+ (0.196)	0.079 (0.135)
School covariates	X	X	X	X	X	X
Teacher covariates	X	X	X	X	X	X
N	20,252	20,252	20,252	34,580	34,580	34,580
Adjusted R^2	0.053	0.062	0.017	0.048	0.069	0.017
Within R^2	0.010	0.009	0.006	0.008	0.008	0.008

NOTE: All models contain year indicators, year x treatment indicators, time-variant and invariant teacher characteristics (race, gender, years of experience, and education level), time-variant school variables (ED, EL, special ed, Black, Hispanic, other non-White, logged enrollment), and school fixed effects, with robust standard errors clustered by school. All models include an indicator for school closures. + $p<0.10$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$

	Detroit only			No Detroit		
TABLE C.8. Estimated Effects on Teacher Mobility, Cohort 1 (by DPSCD)						
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
	Left school	**Left district**	**Left MI ed**	**Left school**	**Left district**	**Left MI ed**
2013-14	-0.007 (0.041)	-0.037 (0.030)	-0.017 (0.039)	0.009 (0.025)	0.006 (0.023)	-0.001 (0.010)
2014-15	-0.026 (0.052)	-0.050 (0.037)	-0.063* (0.029)	0.019 (0.021)	0.003 (0.015)	0.002 (0.010)
2015-16	-0.051 (0.048)	-0.017 (0.037)	0.001 (0.027)	0.010 (0.020)	-0.007 (0.015)	0.006 (0.009)
2017-18	-0.003 (0.036)	-0.018 (0.032)	0.007 (0.027)	0.010 (0.018)	0.014 (0.015)	0.019* (0.009)
2018-19	0.059 (0.048)	-0.009 (0.034)	-0.024 (0.024)	0.008 (0.017)	0.015 (0.016)	0.011 (0.010)
2019-20	-0.002 (0.046)	-0.017 (0.026)	0.004 (0.021)	-0.036 (0.025)	-0.015 (0.022)	0.043** (0.014)
Partnership x 2013-14	0.011 (0.053)	0.049 (0.043)	0.074 (0.044)	0.041 (0.054)	0.017 (0.051)	0.025 (0.022)
Partnership x 2014-15	0.068 (0.065)	0.051 (0.042)	0.086* (0.034)	-0.033 (0.054)	-0.001 (0.046)	0.001 (0.024)
Partnership x 2015-16	0.045 (0.056)	0.022 (0.043)	0.043 (0.033)	0.022 (0.052)	0.005 (0.035)	0.010 (0.021)
Partnership x 2017-18	-0.040 (0.046)	-0.041 (0.037)	0.017 (0.028)	0.029 (0.064)	-0.010 (0.043)	-0.030+ (0.018)
Partnership x 2018-19	-0.000 (0.062)	0.029 (0.041)	0.066* (0.031)	0.068 (0.055)	0.037 (0.042)	0.008 (0.021)
Partnership x 2019-20	-0.012 (0.050)	0.035 (0.034)	0.091** (0.027)	0.057 (0.044)	0.038 (0.033)	0.018 (0.030)
School Closed	-0.242*** (0.029)	-0.146*** (0.021)	-0.037+ (0.020)	-0.308*** (0.024)	-0.207*** (0.019)	-0.165*** (0.014)
Constant	-0.413 (1.894)	-1.756 (1.248)	-0.348 (0.770)	0.948* (0.390)	0.897** (0.315)	0.320+ (0.179)
School covariates	X	X	X	X	X	X
Teacher covariates	X	X	X	X	X	X
N	5,788	5,788	5,788	14,464	14,464	14,464
Adjusted R^2	0.060	0.052	0.021	0.053	0.067	0.018
Within R^2	0.023	0.025	0.017	0.008	0.006	0.007

NOTE: All models contain year indicators, year x treatment indicators, time-variant and invariant teacher characteristics (race, gender, years of experience, and education level), time-variant school variables (ED, EL, special ed, Black, Hispanic, other non-White, logged enrollment), and school fixed effects, with robust standard errors clustered by school. All models include an indicator for school closures. + $p<0.10$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$

	Detroit only			No Detroit		
TABLE C.9. Estimated Effects on Teacher Mobility, Cohort 2 (by DPSCD)						
	(1)	(2)	(3)	(4)	(5)	(6)
	Left school	Left district	Left MI ed	Left school	Left district	Left MI ed
2013-14	-0.027 (0.035)	-0.040 (0.026)	-0.013 (0.024)	-0.011 (0.017)	-0.037* (0.015)	-0.004 (0.009)
2014-15	-0.055 (0.036)	-0.046 (0.029)	-0.059** (0.017)	-0.016 (0.018)	-0.022 (0.017)	0.001 (0.009)
2015-16	-0.020 (0.042)	0.010 (0.031)	0.001 (0.020)	-0.021 (0.016)	-0.023 (0.015)	-0.011 (0.008)
2016-17	-0.056 (0.035)	-0.037 (0.031)	-0.043+ (0.022)	-0.021 (0.015)	-0.015 (0.013)	-0.009 (0.009)
2018-19	-0.005 (0.032)	-0.017 (0.023)	-0.023 (0.024)	0.003 (0.017)	0.008 (0.015)	0.009 (0.009)
2019-20	-0.007 (0.035)	-0.014 (0.027)	-0.000 (0.026)	-0.012 (0.018)	-0.011 (0.016)	0.056*** (0.011)
Partnership x 2013-14	-0.011 (0.044)	0.028 (0.034)	0.027 (0.028)	0.015 (0.042)	0.056+ (0.032)	0.016 (0.020)
Partnership x 2014-15	-0.008 (0.044)	0.010 (0.034)	0.048* (0.019)	0.003 (0.038)	0.018 (0.033)	-0.001 (0.019)
Partnership x 2015-16	0.032 (0.047)	0.016 (0.039)	0.024 (0.023)	0.008 (0.041)	0.024 (0.028)	0.001 (0.016)
Partnership x 2016-17	-0.003 (0.040)	0.012 (0.036)	0.038 (0.025)	-0.007 (0.040)	0.022 (0.028)	0.002 (0.016)
Partnership x 2018-19	0.043 (0.041)	0.016 (0.030)	0.046 (0.028)	0.015 (0.033)	0.032 (0.025)	0.018 (0.018)
Partnership x 2019-20	-0.054 (0.039)	-0.004 (0.030)	0.044 (0.028)	0.016 (0.038)	0.046 (0.031)	0.005 (0.023)
School Closed	-0.215*** (0.022)	-0.160*** (0.017)	-0.095*** (0.022)	-0.419*** (0.031)	-0.399*** (0.027)	-0.121*** (0.028)
Constant	0.607 (0.378)	-0.003 (0.286)	-0.035 (0.210)	0.763** (0.282)	0.489* (0.234)	0.163 (0.149)
School covariates	X	X	X	X	X	X
Teacher covariates	X	X	X	X	X	X
N	8,967	8,967	8,967	25,613	25,613	25,613
Adjusted R^2	0.042	0.028	0.021	0.047	0.069	0.018
Within R^2	0.020	0.018	0.019	0.007	0.007	0.007

NOTE: All models contain year indicators, year x treatment indicators, time-variant and invariant teacher characteristics (race, gender, years of experience, and education level), time-variant school variables (ED, EL, special ed, Black, Hispanic, other non-White, logged enrollment), and school fixed effects, with robust standard errors clustered by school. All models include an indicator for school closures. + $p<0.10$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$

TABLE C.10. Estimated Effects on Teacher Mobility, by Retirement Eligibility	Cohort 1	Cohort 2
	(1)	(2)
	Left MI ed	Left MI ed
2013-14	-0.009 (0.009)	-0.009 (0.009)
2014-15	-0.001 (0.010)	-0.006 (0.008)
2015-16	0.006 (0.009)	-0.009 (0.007)
2016-17	ref.	-0.011 (0.008)
2017-18	0.017* (0.008)	ref.
2018-19	0.013 (0.009)	0.009 (0.008)
2019-20	0.040** (0.013)	0.050*** (0.010)
Partnership x 2013-14	0.058** (0.019)	0.012 (0.012)
Partnership x 2014-15	0.027 (0.020)	0.004 (0.013)
Partnership x 2015-16	0.026 (0.018)	0.017 (0.011)
Partnership x 2016-17	ref.	0.008 (0.012)
Partnership x 2017-18	-0.001 (0.014)	ref.
Partnership x 2018-19	0.019 (0.020)	0.019 (0.013)
Partnership x 2019-20	0.047* (0.021)	0.003 (0.016)
Retirement Elig. x 2013-14	0.161* (0.067)	0.099+ (0.055)
Retirement Elig. x 2014-15	0.030 (0.055)	0.043 (0.055)
Retirement Elig. x 2015-16	-0.007 (0.045)	-0.018 (0.052)
Retirement Elig. x 2016-17	ref.	-0.032 (0.048)

TABLE C.10. Estimated Effects on Teacher Mobility, by Retirement Eligibility (continued)	Cohort 1	Cohort 2
	(1)	(2)
	Left MI ed	Left MI ed
Retirement Elig. x 2017-18	0.028 (0.056)	ref.
Retirement Elig. x 2018-19	-0.049 (0.051)	-0.043 (0.046)
Retirement Elig. x 2019-20	-0.022 (0.051)	0.010 (0.056)
Retirement Eligible	0.150*** (0.037)	0.151*** (0.036)
Partnership x Retirement Elig.	-0.025 (0.063)	0.036 (0.051)
Partnership x Retirement Elig. x 2013-14	0.032 (0.101)	0.030 (0.080)
Partnership x Retirement Elig. x 2014-15	0.021 (0.108)	-0.057 (0.078)
Partnership x Retirement Elig. x 2015-16	0.112 (0.098)	-0.021 (0.074)
Partnership x Retirement Elig. x 2016-17	ref.	-0.016 (0.070)
Partnership x Retirement Elig. x 2017-18	-0.090 (0.078)	ref.
Partnership x Retirement Elig. x 2018-19	0.058 (0.090)	0.004 (0.068)
Partnership x Retirement Elig. x 2019-20	-0.031 (0.080)	-0.098 (0.076)
School Closed	-0.093*** (0.022)	-0.114*** (0.021)
Constant	0.161 (0.154)	0.060 (0.130)
School covariates	X	X
Teacher covariates	X	X
N	20,252	34,580
Adjusted R^2	0.035	0.032
Within R^2	0.025	0.023

NOTE: All models contain year indicators, year x treatment indicators time-variant and invariant teacher characteristics (race, gender, years of experience, and education level), time-variant school variables (ED, EL, special ed, Black, Hispanic, other non-White, logged enrollment), and school fixed effects, with robust standard errors clustered by school. All models include an indicator for school closures. + p<0.10, * p<0.05, ** p<0.01, *** p<0.001

TABLE C.11. Estimated Effects on Teacher Mobility, by Experience Level	Cohort 1	Cohort 2
	(1)	(2)
	Left MI ed	Left MI ed
2013-14	0.011 (0.013)	-0.010 (0.012)
2014-15	-0.000 (0.011)	-0.014 (0.010)
2015-16	-0.004 (0.013)	-0.009 (0.012)
2016-17	ref.	-0.015 (0.010)
2017-18	0.012 (0.014)	ref.
2018-19	0.011 (0.014)	0.000 (0.012)
2019-20	0.017 (0.015)	0.035** (0.012)
Partnership x 2013-14	0.003 (0.023)	0.008 (0.019)
Partnership x 2014-15	-0.012 (0.020)	-0.010 (0.020)
Partnership x 2015-16	-0.002 (0.023)	0.005 (0.019)
Partnership x 2016-17	ref.	0.008 (0.018)
Partnership x 2017-18	-0.024 (0.021)	ref.
Partnership x 2018-19	-0.016 (0.022)	-0.002 (0.021)
Partnership x 2019-20	0.055+ (0.028)	0.021 (0.024)
0-3 years x 2013-14	-0.048* (0.023)	-0.003 (0.018)
0-3 years x 2014-15	-0.021 (0.022)	0.011 (0.018)
0-3 years x 2015-16	-0.006 (0.022)	0.003 (0.018)
0-3 years x 2016-17	ref.	0.023 (0.019)
0-3 years x 2017-18	0.005 (0.024)	ref.
0-3 years x 2018-19	0.021 (0.027)	0.034 (0.022)
0-3 years x 2019-20	0.064* (0.027)	0.047+ (0.024)
16+ years x 2013-14	0.038 (0.025)	0.033 (0.024)
16+ years x 2014-15	0.028 (0.023)	0.021 (0.023)
16+ years x 2015-16	0.043* (0.021)	-0.011 (0.020)
16+ years x 2016-17	ref.	-0.022 (0.016)
16+ years x 2017-18	0.018 (0.021)	ref.
16+ years x 2018-19	-0.027 (0.023)	-0.023 (0.019)
16+ years x 2019-20	0.009 (0.025)	-0.002 (0.020)

TABLE C.11. Estimated Effects on Teacher Mobility, by Experience Level (continued)	Cohort 1	Cohort 2
	(1)	(2)
	Left MI ed	Left MI ed
0-3 years	0.030+ (0.017)	0.031* (0.014)
16+ years	0.015 (0.017)	0.034* (0.014)
Partnership x 0-3 years	-0.025 (0.030)	0.018 (0.028)
Partnership x 16+ years	-0.017 (0.026)	-0.026 (0.021)
Partnership x 0-3 years x 2013-14	0.140** (0.051)	-0.015 (0.037)
Partnership x 0-3 years x 2014-15	0.109* (0.044)	0.023 (0.038)
Partnership x 0-3 years x 2015-16	0.082+ (0.047)	0.008 (0.035)
Partnership x 0-3 years x 2016-17	ref.	-0.038 (0.033)
Partnership x 0-3 years x 2017-18	0.051 (0.044)	ref.
Partnership x 0-3 years x 2018-19	0.110* (0.049)	0.008 (0.038)
Partnership x 0-3 years x 2019-20	0.022 (0.053)	-0.033 (0.040)
Partnership x 16+ years x 2013-14	0.015 (0.037)	0.024 (0.033)
2014 x Partnership x 16+ years	0.004 (0.036)	0.008 (0.032)
2015 x Partnership x 16+ years	0.023 (0.036)	0.025 (0.027)
2016 x Partnership x 16+ years	ref.	0.033 (0.026)
2017 x Partnership x 16+ years	0.009 (0.035)	ref.
2018 x Partnership x 16+ years	0.051 (0.034)	0.063* (0.028)
2019 x Partnership x 16+ years	-0.034 (0.043)	-0.031 (0.033)
School Closed	-0.091*** (0.024)	-0.111*** (0.018)
Constant	0.123 (0.150)	0.068 (0.129)
School covariates	X	X
Teacher covariates	X	X
N	20,252	34,580
Adjusted R^2	0.025	0.023
Within R^2	0.015	0.014

NOTE: All models contain year indicators, year x treatment indicators time-variant and invariant teacher characteristics (race, gender, years of experience, and education level), time-variant school variables (ED, EL, special ed, Black, Hispanic, other non-White, logged enrollment), and school fixed effects, with robust standard errors clustered by school. All models include an indicator for school closures.
*+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001*

TABLE C.12. Estimated Effects on Teacher Mobility, by Race/Ethnicity	Cohort 1	Cohort 2
	(1)	(2)
	Left MI ed	Left MI ed
2013-14	0.002 (0.011)	0.006 (0.010)
2014-15	0.005 (0.011)	0.001 (0.010)
2015-16	0.003 (0.011)	-0.004 (0.009)
2016-17	ref.	-0.005 (0.010)
2017-18	0.014 (0.010)	ref.
2018-19	-0.008 (0.010)	0.002 (0.010)
2019-20	0.018 (0.014)	0.038** (0.012)
Partnership x 2013-14	0.021 (0.027)	0.011 (0.017)
Partnership x 2014-15	0.014 (0.030)	0.009 (0.017)
Partnership x 2015-16	0.025 (0.024)	0.013 (0.016)
Partnership x 2016-17	ref.	-0.001 (0.017)
Partnership x 2017-18	-0.019 (0.022)	ref.
Partnership x 2018-19	0.012 (0.024)	0.026 (0.018)
Partnership x 2019-20	0.012 (0.025)	0.010 (0.021)
2013 x Black	0.021 (0.018)	-0.041* (0.016)
2014 x Black	0.003 (0.017)	-0.009 (0.019)
2015 x Black	0.043+ (0.023)	-0.019 (0.017)
2016 x Black	ref.	-0.021 (0.018)
2017 x Black	0.022 (0.021)	ref.
2018 x Black	0.095*** (0.025)	0.028 (0.019)

TABLE C.12. Estimated Effects on Teacher Mobility, by Race/Ethnicity (continued)	Cohort 1	Cohort 2
	(1)	(2)
	Left MI ed	Left MI ed
2019 x Black	0.119*** (0.029)	0.056* (0.023)
2013 x Hispanic	-0.054 (0.047)	-0.103+ (0.056)
2014 x Hispanic	-0.089+ (0.047)	-0.134** (0.046)
2015 x Hispanic	-0.019 (0.054)	-0.100* (0.050)
2016 x Hispanic	ref.	-0.067 (0.065)
2017 x Hispanic	0.033 (0.058)	ref.
2018 x Hispanic	-0.008 (0.051)	-0.088* (0.040)
2019 x Hispanic	-0.066 (0.049)	-0.147* (0.061)
2013 x Other	0.038 (0.048)	0.070 (0.043)
2014 x Other	-0.000 (0.066)	0.018 (0.052)
2015 x Other	-0.079+ (0.040)	0.042 (0.051)
2016 x Other	ref.	-0.004 (0.037)
2017 x Other	-0.022 (0.054)	ref.
2018 x Other	-0.059 (0.053)	-0.020 (0.039)
2019 x Other	-0.022 (0.056)	0.008 (0.045)
Black	-0.039* (0.018)	0.004 (0.014)
Hispanic/Latino	0.005 (0.046)	0.087* (0.039)
Other, nonwhite	0.054 (0.037)	0.042 (0.030)
Partnership x Black	-0.011 (0.024)	-0.027 (0.020)
Partnership x Hispanic	-0.112* (0.050)	-0.091 (0.063)

TABLE C.12. Estimated Effects on Teacher Mobility, by Race/Ethnicity (continued)		
	Cohort 1	Cohort 2
	(1)	(2)
	Left MI ed	Left MI ed
2013 x Partnership x Black	0.005 (0.042)	0.029 (0.024)
2014 x Partnership x Black	-0.009 (0.036)	-0.023 (0.027)
2015 x Partnership x Black	-0.036 (0.035)	0.013 (0.025)
2016 x Partnership x Black	ref.	0.036 (0.030)
2017 x Partnership x Black	0.008 (0.032)	ref.
2018 x Partnership x Black	-0.045 (0.033)	-0.023 (0.027)
2019 x Partnership x Black	-0.018 (0.040)	-0.048 (0.032)
2013 x Partnership x Hispanic	0.199* (0.099)	0.223* (0.087)
2014 x Partnership x Hispanic	0.133+ (0.077)	0.138 (0.084)
2015 x Partnership x Hispanic	0.278* (0.126)	0.081 (0.093)
2016 x Partnership x Hispanic	ref.	0.027 (0.081)
2017 x Partnership x Hispanic	0.051 (0.100)	ref.
2018 x Partnership x Hispanic	0.175 (0.125)	0.132 (0.087)
2019 x Partnership x Hispanic	0.116 (0.079)	0.260* (0.111)
2013 x Partnership x Other	0.246** (0.082)	-0.081 (0.073)

TABLE C.12. Estimated Effects on Teacher Mobility, by Race/Ethnicity (continued)		
	Cohort 1	Cohort 2
	(1)	(2)
	Left MI ed	Left MI ed
2014 x Partnership x Other	0.135 (0.092)	-0.051 (0.073)
2015 x Partnership x Other	0.092 (0.066)	-0.081 (0.081)
2016 x Partnership x Other	ref.	-0.097 (0.068)
2017 x Partnership x Other	0.037 (0.068)	ref.
2018 x Partnership x Other	0.112 (0.071)	-0.081 (0.069)
2019 x Partnership x Other	0.072 (0.074)	-0.085 (0.077)
Partnership x Other	-0.120* (0.047)	0.082 (0.055)
School Closed	-0.092*** (0.026)	-0.109*** (0.022)
Constant	0.173 (0.156)	0.062 (0.133)
School covariates	X	X
Teacher covariates	X	X
N	20,252	34,580
Adjusted R^2	0.022	0.019
Within R^2	0.013	0.011

NOTE: All models contain year indicators, year x treatment indicators time-variant and invariant teacher characteristics (race, gender, years of experience, and education level), time-variant school variables (ED, EL, special ed, Black, Hispanic, other non-White, logged enrollment), and school fixed effects, with robust standard errors clustered by school. All models include an indicator for school closures. + $p<0.10$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$

TABLE C.13. Estimated Effects On Teacher Mobility, By Gender	Cohort 1	Cohort 2
	(1)	(2)
	Left MI ed	Left MI ed
2013-14	0.004 (0.011)	-0.009 (0.010)
2014-15	-0.006 (0.010)	-0.007 (0.009)
2015-16	0.011 (0.010)	-0.010 (0.009)
2016-17	ref.	-0.012 (0.009)
2017-18	0.019* (0.009)	ref.
2018-19	0.011 (0.010)	0.006 (0.010)
2019-20	0.039** (0.014)	0.054*** (0.011)
Partnership x 2013-14	0.056** (0.020)	0.017 (0.016)
Partnership x 2014-15	0.033+ (0.019)	-0.009 (0.014)
Partnership x 2015-16	0.040* (0.018)	0.011 (0.014)
Partnership x 2016-17	ref.	-0.007 (0.015)
Partnership x 2017-18	-0.001 (0.014)	ref.
Partnership x 2018-19	0.030 (0.020)	0.014 (0.016)
Partnership x 2019-20	0.050* (0.023)	-0.022 (0.017)
2013 x Male	-0.007 (0.016)	0.021 (0.017)
2014 x Male	0.029 (0.021)	0.007 (0.016)
2015 x Male	-0.029+ (0.017)	-0.000 (0.017)
2016 x Male	ref.	-0.002 (0.018)
2017 x Male	-0.003 (0.018)	ref.

TABLE C.13. Estimated Effects On Teacher Mobility, By Gender (continued)	Cohort 1	Cohort 2
	(1)	(2)
	Left MI ed	Left MI ed
2018 x Male	-0.003 (0.021)	0.002 (0.018)
2019 x Male	0.003 (0.021)	-0.014 (0.021)
Male	-0.005 (0.013)	0.008 (0.013)
Partnership x Male	0.025 (0.024)	-0.020 (0.021)
2013 x Partnership x Male	-0.008 (0.033)	0.006 (0.029)
2014 x Partnership x Male	-0.040 (0.038)	0.038 (0.028)
2015 x Partnership x Male	-0.027 (0.037)	0.018 (0.029)
2016 x Partnership x Male	ref.	0.061+ (0.033)
2017 x Partnership x Male	-0.027 (0.033)	ref.
2018 x Partnership x Male	-0.025 (0.040)	0.027 (0.029)
2019 x Partnership x Male	-0.026 (0.040)	0.091** (0.034)
School Closed	-0.097*** (0.024)	-0.113*** (0.021)
Constant	0.152 (0.157)	0.076 (0.136)
School covariates	X	X
Teacher covariates	X	X
N	20,252	34,580
Adjusted R^2	0.017	0.017
Within R^2	0.007	0.008

NOTE: All models contain year indicators, year x treatment indicators time-variant and invariant teacher characteristics (race, gender, years of experience, and education level), time-variant school variables (ED, EL, special ed, Black, Hispanic, other non-White, logged enrollment), and school fixed effects, with robust standard errors clustered by school. All models include an indicator for school closures. + $p<0.10$, * $p<0.05$, ** $p<0.01$, *** $p<0.001$

RESEARCH WITH CONSEQUENCE