ERS

THE ECONOMICS OF TRANSITIONING FROM REMOTE TO IN-PERSON SCHOOL

3 district planning levers for increasing in-person learning (when it's safe)

INTRODUCTION

School districts across the country are determining what "back-to-school" looks like for the 2020-21 school year. These plans vary significantly — from 100 percent remote instruction, to a variety of in-person hybrid models. In many places, increasing COVID-19 infection rates pose significant risks to the safety of students, families, educators, and staff. Because returning to in-person instruction too soon and without comprehensive health and safety measures will lead to dire risks and consequences, many districts are choosing to start off the new school year fully remote. Doing so doesn't come without challenges: fully remote instruction places a significant burden on families, can negatively impact students both academically and socio-emotionally[1], and often exacerbates inequities for Black, Latino, and Native students and for students with higher needs, such as students from low-income backgrounds, students with disabilities, and English learners[2]. For these reasons, districts using remote models must invest in resources such as staffing, academics, mental health, technology, and nutrition — especially for students with the greatest needs.

Districts beginning the school year fully remote plan to explore ways to gradually transition into safely serving more students in person. Exactly *when* these transitions occur throughout the school year and *what* these transitions look like will largely depend on public health conditions. However, **districts can leverage their period of fully remote time as an opportunity to thoughtfully and proactively address many of the complicated details that will arise as part of planning for next steps.**

The following **starting points and levers** can help district leadership teams plan, navigate, and effectively implement these transitions when the time is right for their context.

Continuously monitoring rates of COVID-19 infection and spread

All districts do not have the same options for how they will phase into reopening. A district's pre-existing resources — including funding — are a key determinant of what options will be available for creating opportunities for in-person instruction in ways that protect the health and safety of the school community while delivering high-quality, equitable instruction. Districts' starting points depend largely on resources in four areas:

1. Instructional Staffing: Levels & Teacher Availability
2. Family Preferences
3. Facilities
4. Transportation

Strategically employing three key design levers can help districts develop transition plans that are safe, effective, and equitable by creating opportunities for in-person instruction with greatly reduced group sizes:

1. Increasing the ratio of students per teacher for remote instruction
2. Rotating students in a hybrid model by days or weeks
3. Using teacher and staff roles more flexibly

The range of tradeoffs and possibilities associated with levers depend on a district's starting points. In this paper, we explore how these levers play out in 12 districts from ERS' national comparative database.

*Throughout this paper, we focus on **in-person group size** because among the many components of a robust health and safety plan*, the need for physical distancing (and the implications for group size) requires rethinking core school design structures and resources (such as staffing and scheduling) in ways that fundamentally impact traditional models of teaching and learning. In contrast, other measures such as hand sanitizer and masks are comparatively more incremental to core instructional design and less resource-intensive on a district level.*

A DISTRICT'S STARTING POINT DEPENDS ON RESOURCES

The set of available options and tradeoffs a district faces in its reopening or transition plans depend on its **starting point across four key areas**:

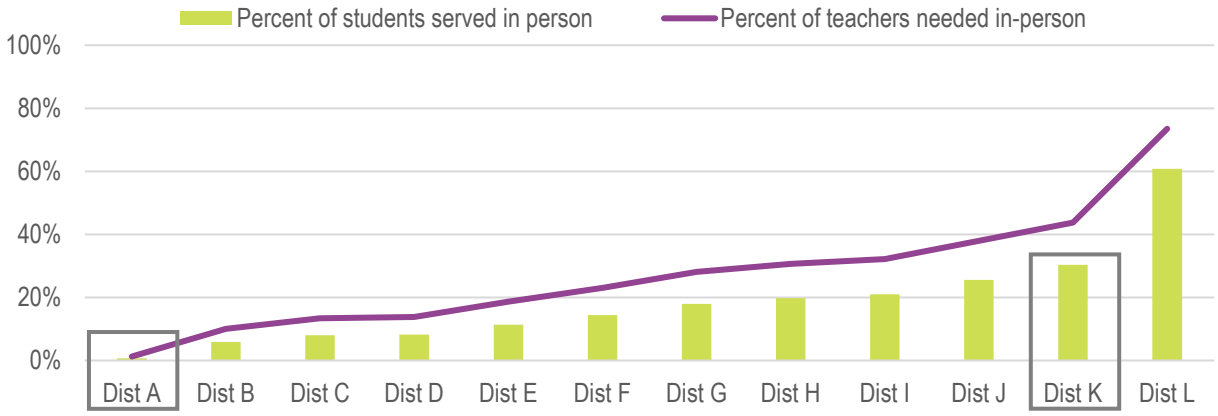
STARTING POINT AREA 1

Instructional Staffing: Levels & Teacher Availability

The options available to districts will depend heavily on: (A) current staffing levels, and (B) the relative proportion of teachers who are able and willing to teach in-person vs. remotely. Holding all else constant, districts with lower staffing levels will not be able to serve as many students in-person at the necessary smaller group sizes. These districts are also more likely to have a greater concentration of students with higher needs, who would benefit the most from opportunities for safe, in-person instruction.

Figure 1 below shows how the percent of students who can be served 100 percent in-person and the percent of in-person teachers needed vary depending on districts' instructional staffing levels. For comparability, this analysis makes the following assumptions: a target group size of 14 for in-person instruction; a student-teacher ratio of 25:1 for remote instruction; teachers instructing students for 85 percent of the day (with time left for lunch and planning); and a five day model (e.g. not hybrid cohorts) across all districts.*

FIGURE 2: How many students can be served fully in-person at group sizes of 14?
(Assumes remote students are staffed at 25:1)



Student-to-Teacher Ratio (District Average):

Dist A	Dist B	Dist C	Dist D	Dist E	Dist F	Dist G	Dist H	Dist I	Dist J	Dist K	Dist L
21.1	20.3	20.0	20.0	19.5	19.1	18.6	18.4	18.2	17.7	17.2	14.4

* This analysis focuses on students and teachers in a **general education setting**, recognizing that students with exceptional needs will require different accommodations and service models. Students with disabilities who are typically served in a self-contained setting and teachers who do not have a primary classroom responsibility (such as interventionists, special education, and ELL teachers) are not included in these ratios.

We use a **group size of 14 as a high-level proxy for an in-person group size that enables physical distancing**. This is based on a sample of anecdotal district plans and a top-down analysis of group sizes resulting from reducing average class sizes by half. In practice, the target group size will vary across districts and across schools depending on the square footage of available facilities.

Figure 1 shows that District A, which has a student-teacher ratio of 21:1, cannot feasibly implement a traditional five-day in-person model with these baseline assumptions about staffing and transitional reopening designs. However, District K, with a student-teacher ratio of 17:1, could serve 30 percent of students in-person — and they could prioritize specific grade levels, student populations, or schools most in need of in-person instruction. In general, **a difference of one in the average student-teacher ratio corresponds to about 8 percent more students who can be served in-person at a 14:1 staffing ratio** (equivalent to one grade level in districts where enrollment is evenly distributed across grades).

Because this analysis is premised on staffing ratios for remote-only models being higher than in-person ratios, the percent of teachers needed for in-person teaching is greater than the percentage of students who can be served. Early results from teacher surveys across the country show that while teachers worry about the detrimental impacts of remote instruction on students' learning, they are also deeply concerned about schools having adequate resources to protect the health and safety of students, staff, and the community.[3] Therefore, it is imperative that staff have full transparency into the safety measures being implemented so they can make informed decisions based on their comfort level and personal circumstances.

Having a lower staffing level does not mean that districts don't have options for creating in-person learning opportunities for a meaningful number of students — but those options come with greater tradeoffs. Later in this paper, we will explore the primary design levers that can enable districts, even within the constraints of their current staffing level, to create opportunities for in-person instruction for more students while using greatly reduced group sizes. We will see that lower-resourced districts will need to employ a greater combination of levers to reach a similar percentage of students in-person.

STARTING POINT AREA 2

Family Preferences

Another critical input is families' preferences for remote vs. in-person instruction, and how this varies for different scenarios of COVID-19 infection rates and social distancing guidelines. Incoming results from surveys conducted around the country consistently show that family preferences for in-person and remote instruction vary greatly. One national study on parents' experiences during COVID-19 shows that despite struggling with childcare and the increased responsibilities of remote learning, a significant number of parents are still uncomfortable sending their children to school in person.[4] In general, districts that expect a greater percentage of families to opt into 100 percent remote instruction will have greater flexibility for designing in-person instructional models because they will be accommodating a smaller number of students.

As part of the feedback collection process, districts should **unpack the root causes of families' preferences, and analyze results by race, income, or student profile** to determine if there are differences that would have equity implications for reopening transitions. For example, the preference for in-person or virtual instruction depends on a combination of health and safety considerations, childcare and technology needs, and families' own knowledge of their children's academic and social-emotional needs. Understanding how families are weighing these factors together to determine their preference for in-person or remote instruction, and how this varies across the community, is critical to ensuring that plans will equitably serve students across in-person and remote modalities.

STARTING POINT AREA 3

Facilities

Given the importance of physical distancing, the facility spaces available to schools and districts will determine the maximum number of students that can be in person at a given site at the same time. This means that even if a district or school has

a staffing level and configuration that will allow higher percentages of students in person, their ability to implement that model could still be limited by the size and number of learning *spaces* available. Although most schools will be able to repurpose space to a certain degree — for example, having elementary music instruction take place in each homeroom and repurposing the music room as an additional homeroom — fully utilized schools will only be able to go so far. Districts should be deliberate about incorporating facilities constraints and the implications for both group size and maximum number of groups as an input into their planning process.

STARTING POINT AREA 4

Transportation

Another operational challenge that has the potential to limit transitional reopening options is student transportation — specifically, the maximum number of students that a district can transport to and from school each day. Similar to facilities, transportation constraints will vary widely depending on district geography and context. All districts will have to make choices about **how physical distancing guidelines translate into reduced capacity on buses.** Some districts may have an ability to increase routes or labor, while others will not. The alternative transportation options (such as public and family-provided transportation) will also vary by district. Districts should clearly define the constraints and flexibilities of transportation early in their planning process to ensure that reopening plans are aligned with operational realities.

TRANSITIONING TO REOPENING: DESIGN LEVERS AND TRADEOFFS

As districts work to ensure the feasibility of their plans for transitioning to in-person instruction (when public health conditions allow), there are **three primary design levers** that can enable districts to serve more students in smaller group sizes:

1. Increasing the ratio of students per teacher for remote instruction
2. Rotating students in a hybrid model by days or weeks
3. Using teacher and staff roles more flexibly

These design levers provide a starting point for key decisions that can significantly improve the feasibility of transitions to in-person instruction and the likelihood of successful implementation. Understanding and quantifying the tradeoffs associated with each lever can enable district and school leaders to make informed decisions that maximize existing resources while ensuring high-quality, safe, and equitable experiences for students.

What these tradeoffs look like in practice depends on the underlying designs that districts have selected. For example, districts vary in taking a central- or school-based approach for 100 percent remote instruction. Districts planning for centralized virtual school will have a greater ability to pull on lever #1, increasing the ratio of students per teacher for remote instruction. On the other hand, districts that choose school-based approaches to remote instruction may find it easier to pull on lever #3 and utilize staff across in-person and virtual modalities, such as offering synchronous instruction for remote students.

While the realities of pulling levers #1 and #3 in this example look different in these district contexts, both present meaningful opportunities to improve resource use. As we enter a school year of unprecedented constraints, **districts should deliberately consider a mix of levers to address the diverse needs and preferences of their students, families, educators, and staff.** ⓘ

Even as preexisting staffing models are pushed to the limit to meet the needs of new plans and designs, districts should also keep in mind that **the transition to new ways of teaching, learning, and "doing school" will also require additional investments to support all members of the school community in adapting to the change.** This

includes operational investments (such as health, safety, and technology), academic and social-emotional support for students and families, and support for teachers and staff who are working in a radically altered environment. ⓘ

Keep this bigger-picture reality, context, and variability in mind as you explore each of the three design levers and the associated tradeoffs for each.

KEY LEVER 1

Increase the student-teacher ratio for remote instruction

Districts can identify a subset of students to serve through in-person school 100 percent of the time based on student need and family preference. To do this, districts should keep equity in mind, recognizing that the benefits of in-person instruction over remote instruction are much greater for some students. In addition to family input, samples of student groups to consider include:

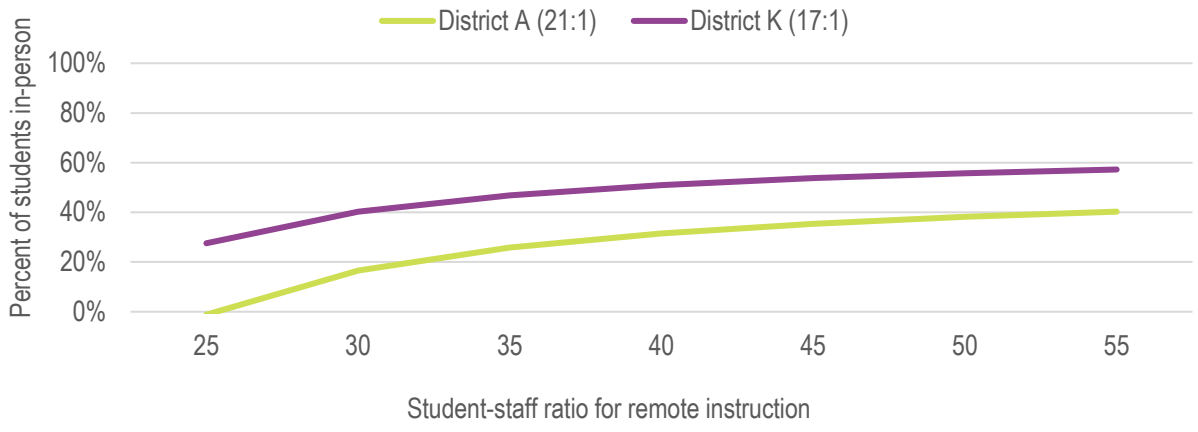
- Students in early grades (Grades K-3)
- Students in transition grades (For example, grades 6 and 9)
- Students with disabilities, English learners, and other exceptional learning needs

Bringing some students back in-person at group sizes that enable adequate physical distancing will require greater staffing levels than most districts have on average. Therefore, to make this work, the key tradeoff is a higher student-to-teacher ratio for remote instruction (to offset the increased staffing needed to support in-person instruction). **The more that a district can increase the student-staff ratio for remote instruction, the more they can offer in-person instruction in smaller, safe group sizes.** Generally speaking, when local public health conditions allow, districts that have an average student-teacher ration of 18 or less will find it easier to bring back at least 50 percent of their students in-person with a reasonable balance of in-person and remote staffing ratios.

Using the same set of assumptions about group size and staffing as Figure 1, the analysis shown in Figure 2 below demonstrates how the tradeoff between remote staffing ratios and the number of students served in-person (at group sizes of 14) varies for two districts. District A has an average student-teacher ratio of 21:1, while District K has a 17:1 ratio. At remote staffing ratios of 25:1, District K can serve 28 percent of their students in person (equivalent to approximately three grade levels), while District A cannot serve any. District A would need to increase their remote staffing ratio to 37:1 to serve the same number of students in person as District K. In both cases, increasing the remote student-staff ratio up to 40:1 – 45:1 results in significantly more students who can be served in person, but the value of this lever decreases significantly after that.

The table on the following page shows a few examples of the remote staffing tradeoffs for Districts A and K to bring back different cohorts of students in person. These tradeoffs will look very

FIGURE 2: How many students can be served in-person at group sizes of 14?



different across districts, but all districts should quantify what is and isn't possible, given their staffing level and flexibility, to determine the tradeoffs that are right for them. In selecting which students to bring back in person first, districts should consider how different groups of students are impacted by in-person vs. remote instructional models, and prioritize students with the greatest need for in-person support.

	Remote student-teacher ratio	
Example cohorts	*District A*	*District K*
K, 1st, and 2nd grades	33	23
K-3rd, 6th, and 9th grades	99	35
Family choice – 60 percent of students opting in-person	Not possible	55

KEY LEVER 2

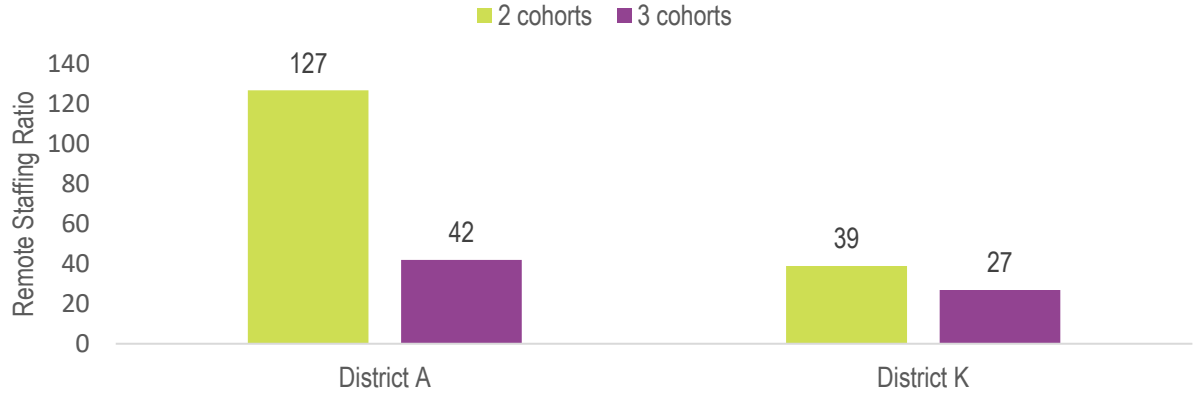
Rotate students in a hybrid model

Depending on local public health conditions, the biggest opportunity for districts to maximize the number of students they can serve in person is to combine a higher student-teacher ratio for remote instruction with a hybrid instructional model[5], where students rotate between in-person days and remote days on a predictable schedule. Among the many design decisions inherent in hybrid models, the two variables for districts to leverage to serve more students in person are: (1) the number of student cohorts, and (2) the staffing to serve students on their remote days. It is also to important to note that although hybrid models can reduce group sizes and exposures for students, they can come with risks for teachers: because teachers serve more than one cohort of students, their total student exposures over the course of the week or month could be as high as in traditional models.

Figure 3 below compares what it would take for Districts A and K to offer hybrid instruction to *all students* with in-person group sizes of 14. To implement a hybrid model with two cohorts of students (for example, using A/B days or weeks), District A would need a staffing ratio of 127:1 for supporting students on remote days (presumably at a range of group sizes). In practice, this would mean that students have minimal opportunities to interact with a teacher in a supervised environment. However, expanding to three cohorts (for example, using A/B/C days or weeks) would enable District A to staff remote days at a ratio of 42:1. Although each student would have access to in-person instruction less frequently, they would have more direct interaction and support on their remote days.

On the other hand, District K can implement two cohorts while staffing students' remote days at a ratio of 39:1. Shifting to three cohorts would free up more even more staffing for remote instruction, but the tradeoff is that students would receive in-person instruction less frequently. **In general, as districts phase back into in-person learning, those**

FIGURE 3: How to Have Hybrid Models with In-Person Group Sizes of 14



with higher instructional staffing levels will be able to offer more frequent in-person instruction while still maintaining a high-quality student experience on remote days. Districts that are more staffing-constrained can consider offering hybrid instruction to only a subset of students or grade levels to meet the needs of students who have the most to gain from in-person touchpoints, and providing remote-only instruction to other students. ⓘ

KEY LEVER 3

Use teacher and staff roles more flexibly

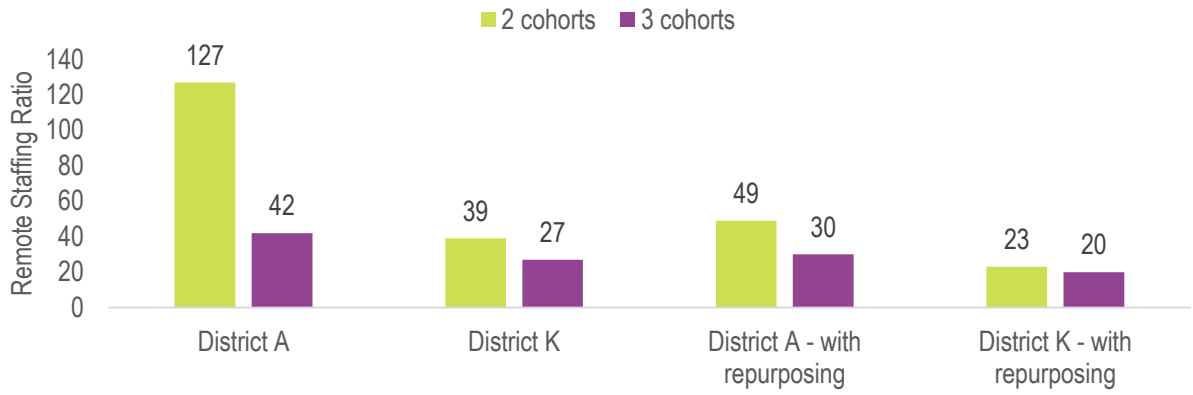
As districts plan for transitioning back to in-person learning in accordance with public health conditions, the third lever that can significantly increase the feasibility of in-person instruction is using teacher and staff roles more flexibly throughout the school day, in ways that support both in-person and remote student experiences. **Rethinking roles like interventionists, aides, and other instructional support staff can provide more opportunities for students to receive differentiated support, while freeing up more homeroom teachers to lead core instruction.**

For example, as part of a hybrid model strategy, instructional support staff can supervise students on remote days, cycling through small groups throughout the day. This would reduce the number of core teachers needed for remote instruction and allow a larger number of students to receive targeted support. Alternatively, instructional support staff who are in person can cover an independent practice block for homeroom teachers, freeing up those teachers to spend time with a remote cohort.

The analysis in Figure 4 below shows how using instructional support roles in districts A and K would improve the tradeoffs associated with a hybrid model. District A is now able to offer a hybrid model with two cohorts at a much more reasonable staffing level for remote days (49 students per teacher, instead of 127). District K could use these roles to improve the staffing level for remote days, or it could provide a more differentiated instructional model on in-person days.

The types of roles districts have flexibility to change, and how much, will vary significantly based on local context, including preexisting terms of collective bargaining agreements or preexisting staffing and instructional models. However, all districts and schools should consider this lever as an opportunity to increase the feasibility of transition plans. The 2020-21 school year will inevitably require changes to the day-to-day jobs of all teachers and staff — but these new conditions can be an opportunity to transform school-based roles in ways that leverage the diverse needs and strengths of staff members *and* provide high-quality, engaging experiences for students. Particularly in resource-constrained environments, a district or school's ability to use teacher and staff

FIGURE 4: How to Have Hybrid Models with In-Person Group Sizes of 14



roles more flexibly could help turn an unrealistic plan into a realistic one.

CONCLUSION

Action Implications for Districts

As districts carefully monitor public health conditions and proactively plan for gradual transitions back to in-person instruction, they can and should consider these three primary design levers — (1) increasing the student-teacher ratio for remote instruction, (2) rotating students in a hybrid model, and (3) using school based roles flexibly — to create realistic plans for in-person and remote modalities that meet diverse student and staff needs and prioritize equity. ⓘ

Districts must keep in mind that all plans for the 2020-21 school year will continue to evolve throughout the year — whether in-person, remote, or a combination of the two — as external conditions change and as we learn more about what's working and what's not. Having plans that are responsive to different scenarios and specifying the conditions under which plans will need to change will enable a more straightforward decision-making process and ease systems' ability to pivot as needed throughout the school year. Additionally, having both districtwide and school-level processes for monitoring the success of implementation will allow schools and districts to not only make the most of the 2020-21 school year, but establish a stronger foundation of knowledge, structures, and practices to keep building on in the years to come.

Action Implications for States

Districts will have a lot on their plates this year, including meeting students' increased needs and navigating ongoing transitions to serve more students safely in-person using small group sizes. To support districts' efforts, there are two main action areas for states to prioritize:

1. Ensure sufficient funding and make sure it is distributed equitably. State leaders must make sure that stimulus and aid packages provide more to districts with higher needs. If budget cuts are necessary, states must work to minimize the impact on districts with higher needs. This will entail considering how different districts have been impacted by COVID and the ongoing challenges they are likely to face. For example, students of color and students with higher needs have been disproportionately affected by the health and economic impacts of the pandemic[6] — so districts serving greater proportions of students of color and students with higher needs are more likely to have incurred greater costs in pandemic response, such as providing meal services and technology to families in need. Additionally, students from these communities experienced greater losses in academic engagement and social-emotional well-being during spring 2020 school closures. Moving forward, these districts will need more intensive supports to catch up, yet without sufficient and equitable funding they will face even greater challenges in meeting students' needs.

2. Support districts' efforts to change models over time as public health conditions change. This involves ensuring that state policies related to areas such as enrollment, attendance, and class size are flexible enough so as not to inadvertently penalize districts shifting resources to better serve students and not creating disincentives for districts transitioning between phases and models over the course of the school year, depending on public health conditions in their community.

APPENDIX

Additional Resources

- *For more about what district, school, and community leaders can do to center their 2020-21 plans around equity, as well as public polling data highlighting where Americans stand regarding resource allocation in response to the COVID-19 Pandemic, check out our newest Alliance for Resource Equity work.*
- *For an example of how to blend school designs across the system, see Section 4 of our ERS Briefing, Decision Points for COVID Comeback Models.*
- *Use our District Reopening Costs Calculator tool to review your district's new operational costs and additional investments in student and teacher supports, such as social-emotional curricula, mobile hotspots, professional development, and collaborative planning time.*
- *Although hybrid models can be operationally complex to implement, they offer a viable strategy for offering some in-person instruction for students. See our COVID Comeback Models for examples of school-level staffing and scheduling models to implement hybrid models — including remote-day schedules, role shifts for teachers and staff, and other key changes to the school day, such as longer arrival/entry times.*
- *To explore the tradeoffs associated with various options for blended reopenings and determine what is feasible based on your district's context, check out our District Trade-Offs Calculator.*

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