BROAD-BASED ACADEMIC SUPPORTS FOR ALL STUDENTS

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Brief No. 6

This brief is one in a series aimed at providing K-12 education decision makers and advocates with an evidence base to ground discussions about how to best serve students during and following the novel coronavirus pandemic. Click here to learn more about the EdResearch for Recovery Project and view the set of COVID-19 response-and-recovery topic areas and practitioner-generated questions.

CENTRAL QUESTION

What kinds of academic supports should schools prioritize for all students across the fall?

KEY INSIGHTS

Breaking Down the Issue

- For children meeting academic benchmarks before the shutdown, slowdowns through September will not be catastrophic. However, delayed openings or shutdowns combined with weak remote learning offerings in the fall may set students' learning back significantly.
- In order to move students through grade-level content, schools will need to lean heavily on tiered strategies that include broad-based supports for all students and intensive intervention for students who have felt the pandemic's impacts most directly.

Strategies to Consider

- Face-to-face instruction is particularly important for early elementary students.
- Targeted support strategies for families, such as take-home books, text messages, and family involvement programs, can effectively supplement in-school curriculum.
- Teaching grade-level content to all students in the fall, while identifying students needing special support, can help students remain on track.
- Scheduled time for teachers to communicate across grade-level teams and efforts to maximize instructional time can help students catch up while avoiding redundancy.
- Teacher looping structures that keep students and teachers together for more than one academic year seem to be beneficial, but the evidence is thin, and large-scale shifts would require teachers to learn new content across multiple grade levels.

Strategies to Avoid

- Large-scale, standardized testing is unlikely to yield results quickly enough and/or at a grain size that teachers can use to plan instruction.
- Remediation programs that supplant regular instruction are likely to prevent students from learning new, grade-level content.

To extend the sparse research base on learning disruptions of this kind, we contacted several experts in English/language arts and mathematics, including Joanne Carlisle at the University of Michigan, Bill McCallum of Illustrative Mathematics, Jon Star and Catherine Snow at Harvard University, and Denise Walston of the Council for Great City Schools. Evidence below draws on advice from these researchers alongside the existing literature.

BREAKING DOWN THE ISSUE

For children meeting academic benchmarks before the shutdown, slowdowns through September will not be catastrophic. However, delayed openings or shutdowns combined with weak remote learning offerings in the fall may set students' learning back significantly.

- **Learning slowdowns likely occurred because of missed instructional days and the hurried transition to remote learning this spring. But even if COVID-related loss across the spring is on the larger side, this change would be small compared with existing learning differences among students as they enter a new grade (see Brief No. 1 in this series for more details).**
- **Delayed openings or school shutdowns this fall and winter are more concerning.**
  - For many grades, average rates of learning are highest during the fall and decrease during the spring.
  - Teacher-student relationships play an important role in engaging and motivating students to learn. Without an in-person start, achieving strong teacher-student relationships will require substantial effort.
- **Rates of learning growth for K-2 students are substantially higher than rates for older students, suggesting disproportionate impact of fall delays and shutdowns for these students.**
  - During these early grades, most students acquire critical literacy and numeracy skills. Because learning in these content areas is cumulative, unfinished learning in these early years may lead to later difficulty with content.
- **Fall delays or shutdowns may widen income and race/ethnicity gaps.**
  - Learning gaps across sociodemographic groups are already large at kindergarten entry, suggesting that disadvantage grows when students are not enrolled in formal schooling.
  - Family income reductions, job losses, as well as illnesses and death can lead to major psychological trauma, depressing children's achievement and mental health.

In order to move students through grade-level content, schools will need to lean heavily on tiered strategies that include broad-based supports for all students and intensive intervention for students who have felt the pandemic's impacts most directly.

- **Additional briefs in this series focus on the intensive interventions that are likely to be most useful for particular groups of students.**
  - Brief No. 1, School Practices to Address Student Learning Loss, focuses on the acceleration strategies that can help to bring students with the greatest learning loss back to a level where they can engage with grade-level material.
  - Brief No. 2, Academic Supports for Students with Disabilities, looks at the types of interventions that are most likely to make a difference for students in special education.
  - Other forthcoming briefs in the series will continue to cover how schools can help children seriously affected by COVID-19, both academically and through mental health screening and support programs.

STRATEGIES TO CONSIDER

Face-to-face instruction is particularly important for early elementary students.

- **While online instruction is less effective for students of all ages compared to in-person school, prioritizing young students to receive face-to-face instruction, when possible, would help mitigate academic risks to this age group.**
  - Early elementary children are most at risk if schools do not return in the fall, because they are still developing the self-regulation and attention skills needed to benefit from online instruction, and because these grades provide students with foundational literacy and numeracy skills.
  - When necessary, synchronous online classes, where students have the ability to ask questions and discuss content with their teachers and peers, are likely better than videotaped lessons, online resources, or packets at helping students learn content, especially when the latter expect students to work individually through content.
  - A forthcoming brief in the series will provide more detail on considerations and strategies for distance learning.

Targeted support strategies for families, including take-home books, text messages, and family involvement programs, can effectively supplement in-school curriculum.

- **Providing children in high-poverty schools with books for reading at home, ideally chosen based on student preferences, significantly improves students' subsequent reading performance.**
  - An experimental three-year study found that students who received books of their choosing on the last day of the school year had higher outcomes on the state reading assessment compared to their peers who did not receive books.
  - Regular personal contact between teachers and families around reading, such as via phone or video calls, may help children remain engaged in learning during the summer and into the fall, should school shutdowns persist.
- **Engaging caregivers by sending text messages that include tips and encouragement on home learning activities has shown promise as a low-cost tool for improving student outcomes.**
  - Programs such as Tips-by-Text break down the complex task of teaching literacy skills into small steps for parents, building understanding and direct activities across the course of the week. A text might read, for instance, "At bath time, point out the letters on the shampoo bottles. Ask your child to name them & tell you the sounds that they make."
  - A randomized study of a year's worth of texts from the Tips-by-Text program for pre-kindergartners found significant improvements in the extent to which parents engaged in home literacy activities as well as gains in student literacy scores at kindergarten entrance.
  - Two smaller but also randomized studies on the effects of summer text messages in literacy and summer text messages plus a free online practice program in math similarly found evidence of improvements in family engagement. Results suggested evidence that achievement impacts may be larger for older children, who could complete the recommended practice activities more independently.
- **Although research on effective interventions to support children's math learning at home is limited, evidence suggests that communications that involve parents in student math homework can lead to gains.**
  - A study of a weekly interactive program called TIPS, or Teachers Involve Parents in Schoolwork, found positive results on family involvement, perceptions of math homework, and math achievement. Well-reviewed programs such as Family Playlists have developed to support greater parental involvement in student learning at home.

- Caregivers can also support children's mathematical growth by talking about math in everyday activities such as cooking and shopping, and choosing to play puzzles and games that involve math.

Teaching grade-level content to all students in the fall, while identifying students needing special support, can help students remain on track.

- **Having teachers teach grade-level material with "just-in-time" review is preferable to beginning the year by repeating material from the end of the prior grade.**
  - Evidence from secondary and postsecondary research suggests that building skills that students lack, at the time those skills become relevant for new material rather than through prerequisites, can improve the rate of student success in coursework and degree completion.
  - In math, U.S. textbooks and instruction are already redundant, with a substantial amount of content retaught across multiple grades. Both curricula and classroom instruction in the U.S. also focus heavily on reviewing old material, even though policy documents have argued that students' conceptual understanding would benefit if review time were reallocated toward developing new material in greater depth.
- **Quick, formative assessments done by classroom teachers can help those teachers know, in detail, what students know and have missed.**
  - In mathematics, chapter pre-tests can work; so can formative assessment item banks like those found here. When effective, formative assessments offer rich tasks that require students to show their thinking and reasoning skills so that these tasks can be used for instructional rather than only monitoring purposes.
  - Studies in higher education suggest that the learning analytics information provided by online instructional providers (e.g. in the K-12 world, Cognitive Tutor, Google Classroom) may help teachers think about which students need additional focus and attention.
- **Systems to track and re-engage students who disengaged during the past spring will be particularly important.**
  - Students may disengage from instruction when it occurs in digital settings, and there is a worry that some will drop out entirely.
  - To the extent possible, schools should identify students at risk (perhaps using administrative data from online learning platforms) and have teachers or other adults in the school reach out.
  - Schools will need to take steps to address students' social and emotional needs, and to strengthen the bond between teachers and students, especially in areas that expect to see intermittent school closures. This topic will be addressed in detail in another brief in this series.

Scheduled time for teachers to communicate across grade-level teams and efforts to maximize instructional time can help students catch up while avoiding redundancy.

- **Teacher collaboration has been found to improve student outcomes and will be particularly crucial during this period.**
  - Multiple studies have found benefits to students from collaborative working conditions that include opportunities for teacher troubleshooting and strong interactions with peers.
  - One study looking at extensive survey data on teacher instructional teams in Miami-Dade, Florida found that the relationship between teachers' reports on the strength of their collaborative experience and student achievement was greatest when teachers' collaboration took place around assessment, instructional strategies, or the curriculum.

- In the current situation, providing teachers time to communicate across grade levels about specific missed content and to adjust curricula accordingly can help improve continuity. Communicating about specific students who have fallen behind or encountered difficulty during the spring of 2020 will also assist current-grade teachers in planning for students' needs.

- **Rethinking school logistics and procedures can help recover instructional time.**
  - Studies of U.S. classrooms show that as much as 23% of in-class time is spent on non-instructional activities, due to unexpected disruptions from things like announcements, telephone calls, fire drills, and unexpected visitors. A recent study in Providence, Rhode Island reported the loss of 10-20 days of instructional time from such small interruptions.
  - Planning ahead for ways to minimize such disruptions in the fall, such as planned reductions in the number of times the school intercom system can be used, can increase order and productivity.

Teacher looping structures that keep students and teachers together for more than one academic year appear beneficial, but the evidence is thin, and the strategy may be less positive if it requires teachers to learn the content in a new grade.

- **Looping structures are understudied, although the evidence that exists on students who have the same teacher across multiple grades is positive.**
  - A recent study – based on correlations rather than experimental evidence – found that having a repeat teacher improved student achievement and discipline at all grade levels, and improved attendance in high school. Another study found smaller but still significant achievement gains for elementary-age students.
  - Studies that track teachers who change grade levels suggest that this sort of within-school churn can reduce teacher effectiveness in years following the switch, potentially counterbalancing some of the positive effects of looping.

STRATEGIES TO AVOID

Large-scale standardized testing at the start of the school year is not likely to be as helpful in remediation as smaller, teacher-driven formative assessments.

- **While several states have discussed the possibility of redoing spring testing in the fall, the usefulness of this strategy is likely to be limited.**
  - The timeline for receiving and analyzing results from large-scale, standardized assessments is not likely to line up with classroom needs.
  - Data from large-scale, standardized assessments is rarely at the grain size teachers need to make progress toward remediating specific information students have missed.
  - Instead, focus on formative assessment.

Remediation programs that supplant regular instruction are likely to prevent students from learning new, grade-level content.

- **Redundancy is already built into the system; adding additional redundancy is likely to slow students down further.**
  - Even for students who have fallen behind, remedial instruction where content is retaught without changing instructional methods or delivery is likely to be less useful than instruction focused on supporting students to move into new content.

FOR MORE INFORMATION

More evidence briefs can be found at the EdResearch for Recovery website. To receive updates and the latest briefs, sign up here.

Briefs in this series will address a broad range of COVID-19 challenges across five categories:

- Student Learning
- School Climate
- Supporting All Students
- Teachers
- Finances and Operations

This EdResearch for Recovery Project brief is a collaboration among faculty and researchers from the following organizations and institutions:

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