A cautionary tale from Kenya: Designing educational pandemic recovery programs to minimize unintended consequences

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As two researchers who view combating educational inequality as the core of our work, we felt concerned and quite helpless in the spring of 2020 when in-person schooling came to a halt for over 1.5 billion children globally. We were especially worried about how this disruption might impact students located in places without widespread access to online learning.

We thought remote tutoring might help boost learning outcomes for these students, and surely couldn’t hurt. But we recently released a somewhat surprising study of an effort to deliver supplemental remote instruction to students in Kenya that should provide an important caution to school system leaders in the United States and beyond who may want to use remote tutoring to help address the impact of missed learning time during the pandemic.

The bottom line: a small amount of supplemental remote instruction may not be enough to meaningfully improve student learning, and worse, it may cause unintended consequences, such as reducing the amount of time students devote to other educational activities, like studying with a parent or completing independent homework, which could in some cases better support their learning. Leaders should continue prioritizing tutoring programs in the coming year, but designing high-quality programs that are appropriately targeted is paramount.

One of our research partners, NewGlobe, is an educational provider focused on expanding access to quality learning opportunities in low- and middle-income countries. We agreed to study one of its interventions to support student learning at home: teacher-student phone calls for third, fifth, and sixth graders attending low-cost private schools in Kenya, where cell phone access is relatively ubiquitous but computer-based home internet is still rare.

We tested two different versions of a seven-week phone-based math intervention with over 8,000 students in 105 schools, some of whom were randomly assigned to a control group, allowing for rigorous evaluation. One version of the intervention involved five-minute weekly calls focused on accountability checks to ensure students were keeping up with distance learning at home. The other consisted of approximately fifteen-minute weekly mini-tutoring sessions delivered by phone. Both were implemented while in-person schooling was on hold between October 2020 and December 2020.

Given students were physically disconnected from their teachers and schools, at the time, we thought some direct contact with a familiar educator had to be better than nothing. We were further encouraged by a new study showing positive impacts of a similar phone-based tutoring intervention in Botswana.
We were therefore surprised when the data from Kenya came back. We found that the accountability calls had no impact on student math achievement. The mini-tutoring sessions actually decreased student performance on in-person math exams up to four months after the intervention.

How did a well-intentioned tutoring intervention designed to provide individualized learning support to hard-to-reach children reduce math achievement? We provide two main explanations. First, we measured the impact of phone support in two ways: Using over-the-phone assessments to gauge the initial effects, and in-person assessments once students returned to classrooms. Lower-achieving students who were more likely to show short-term benefits based on phone assessments were less likely to return to one of our partner’s schools when they reopened for in-person learning, and as a result, they did not take the in-person assessments. Therefore, the intervention decreased achievement on average among those relatively higher-achieving students who did return to their in-person schools after reopening, but we cannot speak to how it impacted children who did not return (for whom it may have had benefits) in the long run.

The second issue may be relevant to school system leaders who plan to use remote tutoring to help students recover from the pandemic. We find suggestive evidence that phone-based tutoring caused some students to spend less time on other educational activities, such as studying independently or with caregivers at home, and that these uses of time may have been more productive than short sessions with a teacher over the phone.

In other words, the program supplanted, rather than supplemented, home-based learning support, and this time-use substitution appeared detrimental to learning, at least for some students. In contrast, there were other students who were induced to study more after the phone calls. Unlike the study group as a whole, students who added study time had bigger gains in math because of the phone calls.
Perhaps after engaging with a teacher by phone, students or their parents felt that their education activities for the day were done. It appears that studying independently or with a family member would have been more productive than working briefly with a teacher by phone, at least for those students with the resources and home environment to do so. This may not be true in all contexts, but it was for this population of families who send their children to low-cost private schools—and are therefore somewhat advantaged compared to average public-school families, but still disadvantaged by global standards.

Importantly, high-dosage tutoring programs are backed by a large and rigorous body of research showing it is one of a rare set of interventions that can have meaningful positive impacts for students who have fallen behind in a range of grades and subjects. Therefore, high-quality tutoring programs should be central to recovery efforts that make up for lost learning time because of the pandemic, and nothing about our study suggests otherwise.

What then are the lessons for educational leaders currently in the midst of rapidly trying to figure out how best to spend relief funds, many of them through tutoring interventions? At least four key recommendations emerge from our findings:

1) **Align program design with high-impact interventions.** The intervention we studied was different in some important ways from the gold standard tutoring programs that have repeatedly demonstrated impressive results. The phone-based mini-tutoring was short—fifteen minutes weekly over seven weeks—when compared to the high-impact, “high-dosage” programs that occur in thirty- to sixty-minute sessions at least three times per week. Phone-based tutoring also occurred outside of school, while the highest-impact in-person programs have been held during the school day (although researchers have not yet confirmed whether this is due to the timing or because programs that were high-quality on other dimensions were more likely to be implemented in school). Existing resources provide guidance for policymakers on careful program design for maximum impact. Leaders should think through what they expect students and families would do in the absence of the program to ensure the intervention is preferable to the status quo.

2) **Target programs to those most likely to benefit.** In the case of the teacher-student phone calls we studied, it was relatively lower-achieving students who benefited from the program. Given the costs of high-dosage tutoring, leaders might consider more intensive, high-quality programming targeted toward a subset of students with the most to gain rather than light-touch, universal programs. Concerns about stigmatizing children should not entirely prevent targeting. School systems can target in-person programs at more aggregate levels, such as for entire low-performing schools rather than individual low-performing students.

3) **Don’t give up on virtual tutoring.** Targeting at the student level without stigma may be easier to accomplish via virtual programs than in-person ones. Although our study does not provide strong evidence in support of distance programs for all students, other studies do find promising results for online and phone-based programs, such as an Italian initiative that provided high-dosage one-on-one remote tutoring and the Botswana phone tutoring mentioned earlier. Distance programs should not be abandoned, but studied further—especially as a new wave of COVID infections fuels public health fears and parental demand for distance options.

4) **Monitor and evaluate programs.** The phone call interventions we studied seemed like they would be effective—or at least do no harm. It is fortunate, therefore, that our partner organization was open to ongoing evaluation. This openness to research allowed it to improve its own future programming, and the field as a whole to learn from the experience. Interventions
that may intuitively seem helpful and even those that have a basis in research can sometimes be ineffective when brought to scale or applied with different populations. Some even backfire. Leaders should therefore commit to rigorous evaluation of recovery efforts, particularly when they adapt, tweak, or tailor interventions to new contexts.

There is still much to learn about whether tutoring can effectively be delivered at a distance. Researchers should also test efforts to communicate to families that remote tutoring programs are supplemental, rather than a replacement for existing supports, to see if this reduces the unwanted time-use substitution we saw in our study.

Given that the pandemic has introduced the most significant disruption to the education system in our lifetimes, we should expect the unexpected and double down on research to learn about how best to support students and families in these unprecedented times. Research requires humility because it involves admitting that we do not know for sure whether a program is working as intended, and that is exactly why it must be part of our recovery efforts.

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About the Evidence Project
The Evidence Project is an initiative from the Center on Reinventing Public Education to advance solutions-oriented analysis of the K-12 response to the COVID-19 pandemic. The project brings together researchers from around the country under the banner of narrowing the gap between research and policy. Learn more at evidence-project.org.

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