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High-Dosage Tutoring

Strong evidence points to equity and well-being benefits from well-designed programs.

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Two years of disruptions to schooling, coupled with recession and other pandemic-induced effects, appear to have widened preK-12 educational inequality. In particular, low-income students of color fell further behind their higher income White peers than they were pre-pandemic, on average, with the largest declines in math achievement.[1] High-dosage tutoring is a strategy uniquely suited to the moment, and state education leaders would be hard pressed to find another intervention backed by as large and rigorous a research base.

An early sign of the challenge came from March 2020 Google search data, which revealed a dramatic widening in the gap between high- and low-socioeconomic communities in the intensity of searches for online learning resources.[2] More recent evidence across a number of studies on academic achievement outcomes confirms that the pandemic's negative effects on learning were greatest for economically disadvantaged students as well as Black and Hispanic children.[3]

What can be done to narrow these inequities going forward? Researchers have shown consistently large, positive effects of high-dosage tutoring in myriad studies based on randomized field trials—the method best suited to fully isolating the causal effect of a program from other factors that influence student achievement. The studies cover a range of academic subjects, including math, across grade levels, contexts, and time periods.[4] They underscore that tutoring is not a new and promising fad but rather a method that has been tested and validated over decades. Researchers are notoriously hesitant to say something "works," and so it is particularly notable that tutoring finds such high levels of support among those trained to spot weaknesses in evidence-based claims.

An added potential benefit of tutoring that is especially relevant in pandemic times is the opportunity to cultivate strong tutor-student relationships. Given the disruption, trauma, and social isolation brought on by the pandemic for many children—disproportionately low-income students of color—the opportunity for students to develop a connection with a caring adult either one on one or in a small group over time could provide much-needed support for students' well-being, regardless of the impact on their academic success.[5]

Vacation Academies

"Vacation academies" represent another notable evidence-based approach to individualizing instruction. These are programs for which leaders recruit talented teachers to work with small groups of roughly 10 struggling students in a single subject over week-long vacation breaks. These programs produced notable gains in math and English language achievement in two Massachusetts districts serving high concentrations of low-performing, low-income children of color: Lawrence[6] and Springfield.[7] My colleagues and I have found that participation in these academies explained more than half of the impact of districtwide turnaround efforts on math achievement in the historically low-performing Lawrence Public Schools. In Springfield, these programs also appeared to improve students' social and emotional well-being, reducing their exposure to exclusionary discipline after the program. Importantly, the reduction in suspensions was concentrated among students in the program who were assigned to the same teacher for the whole week (rather than rotating through different teachers), consistent with the idea that individualized instruction can benefit student well-being by building positive teacher-student relationships.

Given the 1:10 ratios, these programs come with lower upfront costs than

high-dosage tutoring. These programs could also be thoughtfully paired with a tutoring program to maximize results. For example, vacation academies could serve students below proficiency benchmarks but not at the very bottom of the performance distribution (the students for which these programs have demonstrated impacts in the past) while one-on-one tutoring could be reserved for those in need of the most intensive, tailored forms of support.

Effective One-on-One Tutoring

Getting back to tutoring, it is important to note that not all programs are created equal. A subset generates the most impressive results, often referred to as "high-dosage" programs. As the term implies, these programs are implemented with high levels of frequency—typically at least three 30- to 60-minute sessions per week; over relatively long periods—at least 10 weeks if not a full school year; and with low tutor-to-tutee ratios—between one-to-one and one-to-four.[8] Although the highest-impact programs are typically staffed with certified classroom teachers, studies have also documented successful models that rely on paraprofessionals or AmeriCorps members. Therefore, it appears that, with low student-tutor ratios along with the right training and support, tutors from a wide variety of backgrounds can improve student outcomes.

Getting program design right is critical to avoid waste and unintended consequences.

Getting program design right is critical to avoid waste (at best) and unintended consequences (at worst), as illustrated by a recent study of a light-touch remote math tutoring program in Kenya that actually resulted in negative effects on student learning.[9] The program did not conform to all that is known about tutoring best practices. It was also implemented universally, although evaluation revealed that the program appeared most productive for subsets of students who had been lower achieving before the pandemic.

Virtual Tutoring

Program design is particularly important when it comes to virtual tutoring programs, which several states are implementing.[10] The research base is much more limited for these programs than it is for in-person models. Just a few recent studies have shown gains from remote tutoring in the United States, Italy, and Botswana.[11] These are relatively small-scale studies, and questions remain about the populations to which these results generalize and whether the gains are consistently comparable to those generated by in-person programs. Additionally, it may be more challenging to generate deep tutor-student relationships virtually than in person. The broader literature on the disappointing results of virtual versus in-person schooling should give state leaders pause before implementing remote tutoring at scale.[12]

If states are experimenting with virtual tutoring, particularly in communities for which there remains high demand for online learning options, state leaders can insist on pairing these programs with rigorous evaluation, both to inform state policy and the field more broadly. It would truly be tragic if unprecedented federal education recovery dollars were spent on untested, ineffective programs without generating information from which policymakers could learn.

Bringing Programs to Scale

Despite tutoring's impressively high benefit-cost ratios,[13] upfront costs have historically been a barrier to wide-scale implementation. Pandemic-related staffing shortages also create challenges. State leaders should resist the temptation to implement subpar universal programs and instead opt for high-quality tutoring programs targeted to those student populations the pandemic hit hardest and who are most likely to benefit. To avoid creating stigma, leaders could implement programs at higher levels of aggregation—for example, in schools serving high concentrations of low-performing students (rather than targeting particular students). Additionally, leaders can consider other approaches to individualized instruction—such as vacation academies—that are likely more affordable to bring to scale given their 1:10 rather than 1:1 ratios.

Role for State Leadership

States can play an important role in getting individualized instructional programs up and running. State boards can advocate for high-quality programs that are designed in alignment with research-based best practices or are paired with evaluation when they diverge from proven models. States can centralize efforts to

recruit talented tutors from across the state to work with students who do not necessarily live in their own geographic district. Massachusetts has done so with its vacation academy program, which the Massachusetts Department of Elementary and Secondary Education dubs "Acceleration Academies." State education agencies could assume responsibility for program overhead rather than asking already-overwhelmed districts or schools to build their own programs from scratch.

Some states, like Utah, are using federal recovery funds to support partnerships connecting community centers that provide tutoring programs with schools so that these centers can better align their efforts with the schools' learning objectives. Finally, state leaders can support efforts to build a learning agenda and support rigorous evaluation of new tutoring and academy programs so that the field can gain a better understanding of how adaptations affect program success.

Educational inequality was already unacceptably high before the pandemic but appears to have grown quite dramatically since its onset. This is true despite educators' and parents' herculean efforts to support students while navigating their own pandemic-related challenges and despite the fact that low-income children of color are no less capable than their higher-income White peers. The growth in inequality simply reflects the pandemic's uneven effects on learning opportunity and other divergent life experiences of children and families based on race and class.

High-dosage tutoring and vacation academy programs can reduce this educational inequality by providing individualized instructional support to those students hardest hit by COVID-19 and by contributing to students' overall social and emotional well-being. However, program design and targeting matters for maximizing positive impact and avoiding unintended consequences. State leaders, including state boards, have a special role to play in the success of efforts to provide individualized support for the students who need it most. ■

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