

TITLE

Combatting Pandemic Learning Loss

DESCRIPTOR

Providing data-driven insights to reduce COVID's impact on STEM learning

BODY

COVID-19 school shutdowns likely create learning loss, especially for the underserved.

Research has demonstrated that time away from regular classroom instruction leads to declines in student performance. The performance decline that typically follows summer vacation is known as “summer learning loss.” With COVID-19 forcing high schools to close and abruptly shift to online instruction, students are expected to suffer a “pandemic learning loss,” especially in STEM learning. And because poor, minority, and underserved students are less likely to have access to home computers, high-speed internet, and other technology, the sudden shift to online learning is like to exacerbate existing inequalities in new and serious ways. Left unchecked, the COVID-19 pandemic may narrow the STEM pipeline to only those students whose families have the resources to easily access e-learning opportunities.

To mitigate pandemic learning loss, we must understand its scope.

To understand the full impact of pandemic learning loss on American students—and by extension, the country’s future STEM workforce—the National Science Foundation has funded a NORC-designed study to accurately measure learning loss on a national scale. The study will explore which students are participating in their school's formal STEM education during the pandemic, which are not participating, and why. It will also study which students are participating in informal STEM activities during the pandemic, which are not, and why. The study will also ask students about their plans for their future and the extent to which those plans have changed due to COVID-19. Our goal is to provide an empirical estimate of STEM-related pandemic learning loss for poor and minority teens compared to their peers.

We use two sources of data to get a clearer picture.

Our study draws on two sources of data. The first is a survey administered through our nationally representative AmeriSpeak Teen Panel. The second dataset comes from Infinite Campus, a national Student Information and Learning Management System currently serving approximately 2.5 million high school students. Infinite Campus will allow us to map students' STEM trajectories pre-COVID, collect information on formal online STEM learning (e.g., minutes logged in, numbers of log-ins, communications with teachers, performance on assessments), and map their STEM trajectories post-COVID.

These efforts will illustrate how and where learning loss is happening so that we can quickly take measures to reduce its impact and ensure that the future STEM workforce is diverse, robust, and vibrant.