New research shows tutoring can improve academic outcomes, mental health

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A new study confirms tutoring improves academic achievements, leading the launch of a computer-assisted learning pilot program that simulates tutoring and could be scaled to reach struggling students. Credit: Adam Wagner/Unsplash

A new study by U of T Mississauga economist Philip Oreopoulos shows that one-on-one and small group tutoring consistently improves academic achievements, offering important insight into ways to assist students

struggling during the COVID-19 pandemic.

Oreopoulos and his colleagues conducted a meta-analysis of 96 randomized controlled trials of tutoring programs that span three decades. They found that students randomly selected to receive tutoring in math or English outperformed their peers more than 80 percent of the time, and half the studies in the analysis reveal very large effects.

"The study highlights how much consensus there is that tutoring is effective," says Oreopoulos, explaining such significant positive effects are almost never seen in social science research. About half of the studies pegged the impact at 30 percent greater than one standard deviation, which translates to meaningful academic improvement.

The study also found that tutors who were teachers or paraprofessionals with some training were more effective tutors than volunteers, and tutoring done at school in the context of the school day was more effective than tutoring done at home or after school.

"I think that it was more effective because tutoring done at school is more structured, so students end up more likely to actually receive tutoring than in less supervised environments," says Oreopoulos, who was recently named a U of T Distinguished Professor.

His study, issued in July as a working paper for the National Bureau of Economics Research, is part of his work as co-chair of the education group at the Abdul Latif Jameel Poverty Action Lab (J-PAL) at the Massachusetts Institute of Technology. J-PAL's objective is to improve the effectiveness of poverty programs by providing policy-makers with clear scientific results that help shape successful policies to combat poverty.

"This study is especially timely because there is currently a lot of

discussion about how we can deal with the concerning situation caused by COVID-19 that makes learning conditions far from optimal," says Oreopoulos. "The disruptions point toward a lower trajectory of learning, especially for those who are disadvantaged to begin with. It's quite disturbing."

The key is finding a way to make tutoring scalable. Oreopoulos cites a Harvard Kennedy School study that was done in partnership with three Italian universities. Volunteer tutors from the universities were randomly paired with students in schools recommended by their principals. The tutors received training online and provided three hours of weekly tutoring for two months. The students showed significant academic improvement in Math, English and Italian, as well as improvement to non-academic outcomes including mental health and life satisfaction, as reported by the students, their parents and teachers.

"The program is exciting because it's the kind we need right now," says Oreopoulos, who is working with another professor at U of T to set up a similar program in Canada.

He is also piloting a test of computer-assisted learning that simulates the tutoring experience, working with 10 teachers in Utah through Khan Academy. They are using a program that allows students to work at their own pace and get immediate feedback on their assignments and problems, which are based on the material discussed in class.

"This is free and scalable, so it might be worth considering scaling up," he says. "I'm hoping to evaluate the program next year, to provide evidence for whether teachers should be doing more of this."