RESEARCH INSIGHTS

Does Educational Support for Struggling Students Also Benefit High Achievers?

- This paper finds that providing educational support to children with low baseline reading scores affected their academic performance as well as that of their higher-achieving classmates.
- Results show a positive impact on learning for high-achieving students who were not part of the remediation program but were in schools with children who did.
- Our evidence suggests that the results are not explained by class size reductions or changes in teacher practices.

CONTEXT

Peers have a central role in determining academic outcomes at all education levels. This includes the effect of low-achieving students on the performance of the rest of their classmates. Possible negative externalities that low achievers may have on other students provide a compelling argument for why it is key to understand the effects of programs targeting only some students. Indeed, all parents and policymakers should be concerned about how to support students with lower grades. Previous work, however, mostly describes peer effects and does not consider how to address the impact of low-achieving peers on the rest of the class.

PROJECT

This paper exploits the randomized evaluation of a remedying education program that increased reading skills for low-achieving third-grade students in Manizales, Colombia. We study whether reading improvement among those students generated gains among other students through achievement peer effects. Students with baseline reading scores lower than a certain threshold were deemed eligible for tutoring classes. In treatment schools, eligible children were taken out of regular classes for 40 minutes, three times a week. Students worked in small groups with a qualified tutor, who followed a structured pedagogical curriculum. In control schools, eligible children continued their classes as usual.

RESULTS

What effect did improving low-achieving students' literacy skills have on their higher-achieving classmates? We investigated the relationship between the performance of high and low achievers and found that the test scores of higher-achieving students negatively correlated with the share of low achievers in their classroom. Figure 1 plots the relationship between end-of-the-year literacy and math scores of non-eligible students and the share of low achievers before the intervention, in the control schools only.

We compared the test scores of higher-achieving students after one academic year, finding substantially greater achievement across the board in treated schools compared to control schools. In treatment schools where there were tutoring activities, higher-achieving students outperformed similar students in control schools by 0.108 of a standard deviation. This coefficient is sizable and represents roughly 30 percent of the treatment effect on the eligible students (low achievers). For both literacy and math, average achievement decreases monotonically with the share of low-achieving students.

We also estimated the effect of peers' contemporaneous outcomes on high achievers and found strong evidence of peer effects on academic outcomes. Our results imply that a one-standard-deviation increase in peers' contemporaneous test scores increases individual reading scores by 0.679 of a standard deviation.

To address whether these changes were due to direct (non-peer) or indirect (peer) treatment effects, we ruled out alternative mechanisms coming from a reduction in class size. Additionally, we did not find evidence that teachers changed their effort or teaching practices. Rather, we found suggestive evidence that some of the effect might be due to a reduction in students' misbehavior. Finally, the effects were stronger in classes where eligible (low achiever) peers improved the most, consistent with direct peer-to-peer learning interactions.

Key Concept

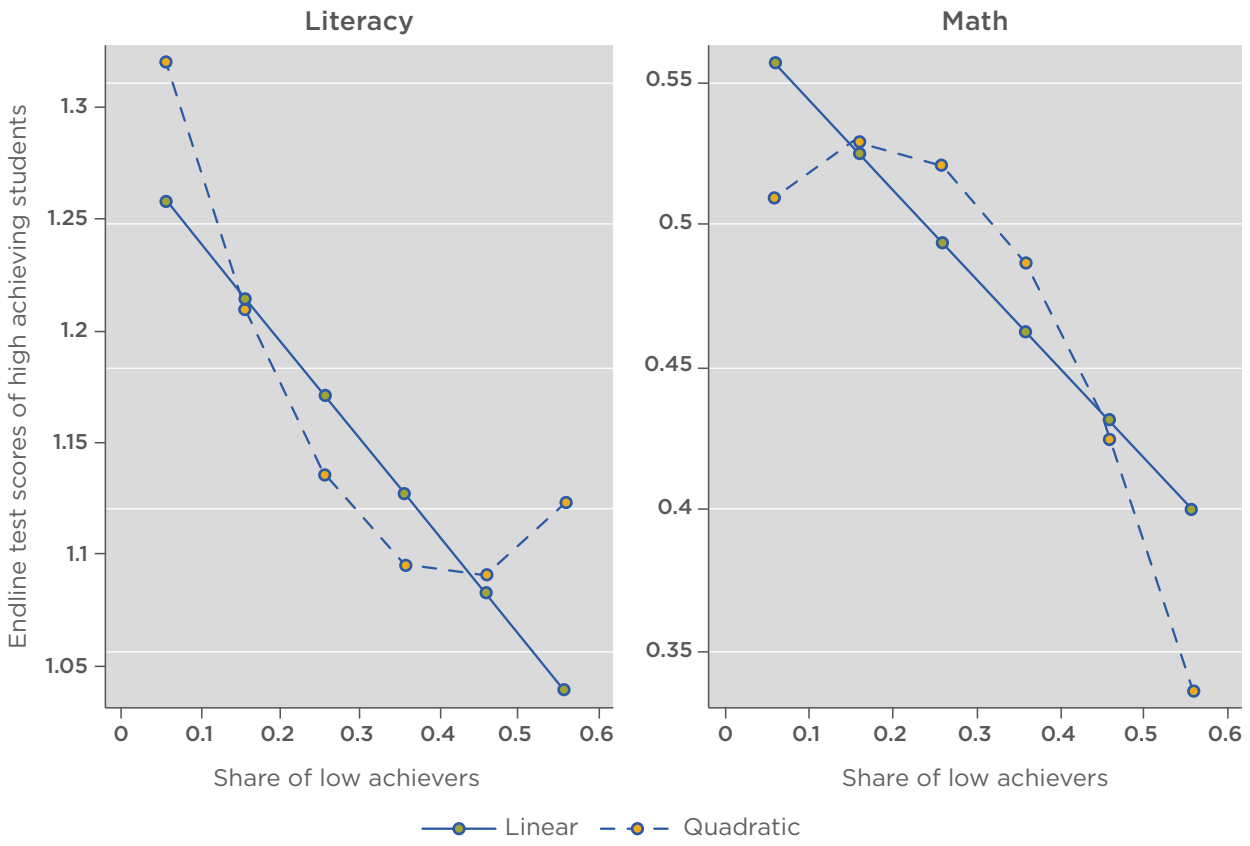
PEER EFFECTS

used as an umbrella term that captures the impact of peers' outcomes on an individual's outcome. In classroom settings, potential mechanisms include peer-to-peer learning, student misbehavior, and teacher practices.

POLICY IMPLICATIONS

Our findings suggest that policies looking to support the bottom of the achievement distribution have the potential to generate social-multiplier effects for all students, providing a strong rationale that underscores why all members of society can benefit from improving the educational outcomes of only some. It is possible to substantially improve the quality of education for all while focusing on the students who need it the most.

Figure 1. Test Scores of Higher-Achieving Students in Relation to Low Achievers in Control Classrooms



Nota: Lines represent linear and quadratic fits of standardized endline test scores of high-achieving students as a function of baseline share of low achievers in non-treatment schools. Controls include a second-order polynomial in age, gender and school fixed effects. The figure is trimmed at the 5th and 95th percentiles of the distribution of classroom share of low achievers.

FULL STUDY

Berlinski, S., M. Busso and M. Giannola. 2022. "Helping Struggling Students and Benefiting All: Peer Effects in Primary Education."

DEPARTMENT OF RESEARCH AND CHIEF ECONOMIST

The Department of Research and Chief Economist generates new ideas to enrich the knowledge base that supports the policy agenda of the Inter-American Development Bank (IDB) and its member countries for achieving sustainable and equitable development in the region. To maximize the impact of its research, the Research Department carries out activities that serve as inputs to other IDB departments, governments, the academic community and public opinion in the region.