

## More than half of US students experience summer learning losses five years in a row

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Following U.S. students across five summers between grades 1 and 6, a little more than half (52 percent) experienced learning losses in all five summers, according to a large national study published today. Students



in this group lost an average of 39 percent of their total school year gains during each summer. The study appeared in *American Educational Research Journal*, a peer-reviewed publication of the American Educational Research Association.

"Many children in the U.S. have not physically attended a school since early March because of the COVID-19 pandemic, and some have likened the period we're in now to an unusually long summer," said study author Allison Atteberry, an assistant professor at the University of Colorado—Boulder. "Because our results highlight that achievement disparities disproportionately widen during the summer, this is deeply concerning."

"Teachers nationwide are likely wondering how different their classes will be in the coming fall," Atteberry said. "To the extent that <u>student</u> learning loss plays a larger-than-usual role this year, we would anticipate that teachers will encounter even greater variability in students' jumpingoff points when they return in fall 2020."

For the study Atteberry and her co-author, Andrew J. McEachin, a researcher at the RAND Corporation, a nonprofit research organization, used a database from NWEA, which includes more than 200 million test scores for nearly 18 million students in 7,500 <u>school districts</u> across all 50 states from 2008 through 2016.

The authors found that although some students learn more than others during the school year, most are moving in the same direction—that is, making learning gains—while school is in session. The same cannot be said for summers, when more than half of students exhibit learning losses year after year.

Twice as many students exhibit five years of consecutive summer losses—as opposed to no change or gains—as one would expect by



chance, according to the authors.

The pattern is so strong that even if all differences in learning rates between students during the school year could be entirely eliminated, students would still end up with very different achievement rates due to the summer period alone.

"Our results highlight that achievement disparities disproportionately widen during summer periods, and presumably the 'longer summer' brought on by COVID-19 would allow this to happen to an even greater extent," said Atteberry. "Summer learning loss is just one example of how the current crisis will likely exacerbate outcome inequality."

Among the students studied, depending on grade, the average student loses between 17 and 28 percent of school-year gains in English language arts during the following summer. In math, the average student loses between 25 and 34 percent of each school-year gain during the following summer.

However Atteberry and McEachin focus their attention not on average patterns of summer learning loss, but rather on the dramatic variability around those means from one student to another.

"For instance in grade 2 math, at the high end of the distribution, students accrue an additional 32 percent of their school-year gains during the following summer," said Atteberry. "At the other end of the distribution, however, students can lose nearly 90 percent of what they have gained in the preceding school year."

"This remarkable variability in summer learning rates appears to be an important contributor to widening achievement disparities during the school-age years," Atteberry said. "Because summer losses tend to accumulate for the same students over time, consecutive losses add up to



a sizeable impact on where students end up in the achievement distribution."

Atteberry noted that more research is needed to better understand what accounts for most of the summer variation across students. Prior research, including a 2018 study published in *Sociology of Education*, has found that race/ethnicity and socioeconomic status predict summer learning but, together, account for only up to 4 percent of the variance in summer learning rates.

Policy leaders across the United States have experimented with different approaches, including extending the <u>school year</u> and running summer bridge programs, to address concerns with summer learning losses. These need to be further assessed for effectiveness, said Atteberry.

Researchers have pointed to gaps in resources such as <u>family income</u>, parental time availability, and parenting skill and expectations as potential drivers of outcome inequality. Many of these resource differences are likely exacerbated by summer break when, for some families, work schedules come into greater conflict with reduced childcare.

"Our results suggest that we should look beyond just schooling solutions to address out-of-<u>school</u> learning disparities," Atteberry said. "Many <u>social policies</u> other than public education touch on these crucial resource inequalities and thus could help reduce <u>summer</u> learning disparities."

**More information:** Allison Atteberry et al, School's Out: The Role of Summers in Understanding Achievement Disparities, *American Educational Research Journal* (2020). DOI: 10.3102/0002831220937285



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