

# In-person learning helped narrow reading gaps during pandemic, study finds

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A study led by a North Carolina State University researcher found that

although there were steep learning losses in reading for elementary school students during the COVID-19 pandemic, in-person learning opportunities helped some of those students mitigate learning loss and accelerate gains in reading compared to online learners. Younger elementary students from lower socioeconomic backgrounds, English learners and students with disabilities were particularly affected by the pandemic school closures.

"Online instruction was inevitable during the [pandemic](#), but in-person schooling was an equalizer," said the study's lead author Jackie Relyea, assistant professor of education at NC State. "Even though kids in this large North Carolina [school](#) district who chose in-person instruction spent around two months in school during the pandemic, many of them made faster growth over time in reading than their peers who opted for fully remote instruction. This aligns with the evidence we've seen from summer learning loss."

The study, published in the journal *Reading and Writing*, compared average reading gains for third, fourth and fifth graders in a single large school district in North Carolina on the Northwest Evaluation Association (NWEA) Measure of Academic Progress (MAP) Growth reading test, a computer test looking at students' foundational reading skills, language and writing, vocabulary and text comprehension.

They compared students' average scores at the beginning and end of the 2020–21 school year with students' average gains made across the 2018–19 school year. During the pandemic, the district offered students the choice of returning to school, which allowed researchers to compare the impact of in-person versus [online instruction](#).

"During the fall semester, students had 10 days in-person, while the rest of the semester was online, and in the spring, they came to school for almost 50 days," Relyea said. "The other group was in fully remote

instruction the entire time."

During the pandemic, third, fourth and fifth graders made lower reading gains on average compared to students in the 2018–19 school year. The steepest declines by age were for third graders. During the pandemic, their average gain was less than half—at 48%—of average gains made by students in the 2018–19 school year, while fourth graders' average was 65% of gains made by students in 2018–19, and fifth graders was 58%.

"Third graders typically learn and build foundational reading skills like word reading, spelling, vocabulary and text comprehension," Relyea said. "They need explicit instruction and guided practices to become independent readers, and they also are still developing self-regulation skills for learning at home."

Researchers also saw lower reading gains for third- and fourth-grade students from lower socioeconomic status households during the pandemic, compared with pre-pandemic students, and students from households with a higher socioeconomic status. They also saw a similar trend for English learners.

"Students in high socioeconomic backgrounds might have had better access to educational resources, technology, their parents' support, stable Internet connectivity during homeschooling," Relyea said. "For English learners, teachers provided remote learning resources, but there were limited opportunities for these students to develop English language skills through interaction and academic conversation with their peers and teachers."

For students with disabilities, reading gains were dramatically lower during the pandemic than they were for students with disabilities in the 2018–19 year, with the steepest declines seen for third and fourth

graders.

"For students with disabilities, many special education services were suspended during the pandemic," Relyea said. "Most teachers faced challenges in trying to accommodate the unique needs of students with disabilities. There was a significant loss for these students."

When researchers compared reading gains for students who chose remote instruction in 2020–21 to students who chose to return for in-person learning when possible within the group of students from lower socioeconomic groups and English learners, they saw that students who chose in-person learning made larger gains, helping narrow gaps for students.

"It was interesting to see that students who chose in-person instruction were starting the 2020–21 academic year at a lower level of reading, but they made better progress over time than their peers who chose the fully-remote option," Relyea said.

While they did see achievement gaps starkly narrow for students in the fourth and fifth grades, progress was less pronounced for third graders. They also observed an inconsistent pattern for students with disabilities who participated in in-person instruction.

"An online learning environment generally requires learners to work more independently and have self-regulatory learning strategies and metacognitive skills to manage their learning," Relyea said. "However, with limited scaffolding and guidance available during the sudden shift to distance settings, many younger children, especially those in vulnerable groups, may have not been able to develop these skills enough to foster their learning."

In future work, researchers want to incorporate detailed contextual

information on online versus in-person instruction during the pandemic.

"We don't have data about what went on in remote versus in-person instruction during the pandemic," Relyea said. "But delving into features of instructional practices and students' interactions would help us better understand how and why the in-person learning mode provided enhanced learning opportunities for students to make continuous growth in reading during the pandemic, particularly for lower-achieving students.

"It would also give us insight into online instructional approaches and resources that need to be considered in remote schooling to meet the diverse learning needs of [students](#) in the future."

The study, "The COVID-19 Impact on Reading Achievement Growth of Grade 3–5 Students in a U.S. Urban School District: Variation Across Student Characteristics and Instructional Modalities," was published online in *Reading and Writing*.

**More information:** Jackie Eunjung Relyea et al, The COVID-19 impact on reading achievement growth of Grade 3–5 students in a U.S. urban school district: variation across student characteristics and instructional modalities, *Reading and Writing* (2022). [DOI: 10.1007/s11145-022-10387-y](#)

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