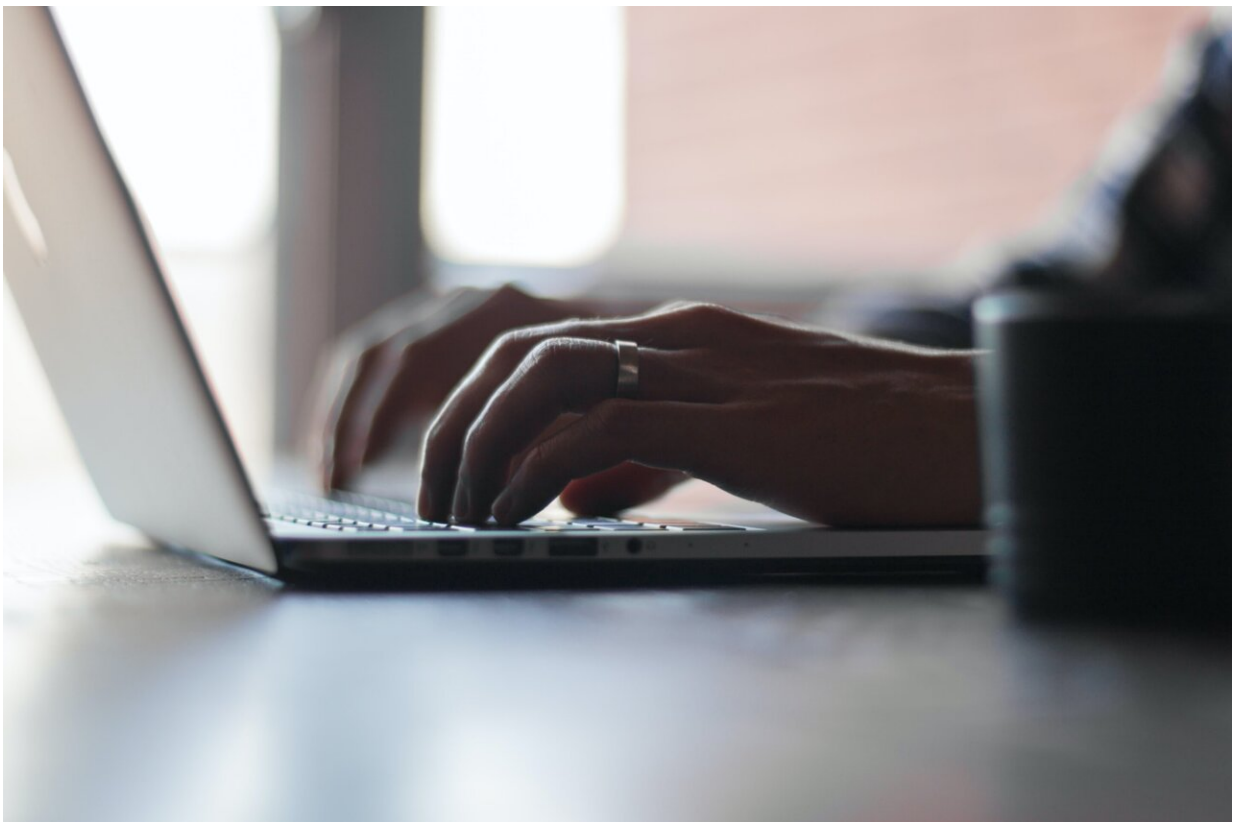


# Remote teaching during the pandemic disadvantages students in New Jersey's lower-income school districts

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The rollout of remote teaching in New Jersey during the COVID-19 pandemic was haphazard, under-resourced, inequitably delivered,

contributed to student and teacher stress and may exacerbate digital and social inequality, according to a Rutgers study.

By analyzing responses from structured interviews with a sample of 21 K-12 [public school teachers](#), the researchers found students in lower-income school districts experienced inequities in online teaching and learning opportunities, compared with students in middle-income and wealthier districts. The open-access study was published in the *Journal of the Association for Information Science and Technology*.

"While the pandemic created challenging emergency remote teaching conditions for students across income brackets, teachers from lower-income districts reported more challenges in students' consistent access to working, functioning computers, issues with networking connectivity and bandwidth, and gaps in prior student and family digital literacy needed to effectively use e-learning tools," said Rebecca Reynolds, an associate professor in the Rutgers School of Communication and Information and lead author of the study.

"Across all income levels, elementary school teachers also reported that younger students struggled to use the available e-learning technologies without significant intervention of home caretakers," she said. "This was in part because design of corporate e-learning platforms such as Google Classroom, which were used almost ubiquitously, did not meet the developmental needs of K-12 students for structured learning as novices."

In spring 2020, at the beginning of the state's pandemic lockdown, 584 [school districts](#) were required to develop plans for emergency remote teaching. While funds from the Coronavirus Aid, Relief, and Economic Security Act contributed significantly to technology purchases, beyond a PDF list of suggestions for [online-learning platforms](#), districts received little guidance from the state on structuring online classes, choosing

technology or paying for online service licenses.

That left district administrators and K-12 teachers essentially on their own to develop lesson plans and decide how to deliver them, Reynolds said. In some cases, teachers even paid one another out of pocket for lesson plan guidance and online-learning tips.

Complicating the shift to remote instruction was an already present [digital divide](#). In 2017, nearly half of New Jersey households earning \$20,000 or less were without [internet access](#), compared to 6 percent of households earning \$75,000 or more, according to U.S. Census data.

These gaps persisted at the start of the pandemic and set a digital inequality backdrop for the implementation of predominantly online remote learning, Reynolds said.

Other key findings include:

- Compared with higher income districts, teachers in lower-income districts appeared to report larger attendance gaps as barriers to online instructional delivery, reporting student absences ranging between 30 percent and 50 percent during the initial lockdown.
- Shortages in devices, particularly in lower-income districts during this timeframe, requiring children within families to share school-issued laptops (one per family).
- An overreliance on online-learning technologies not tested for evidence-based effectiveness in supporting [student](#) learning processes and outcomes.
- Elevated anxiety and stress among teachers and students.

"One thing we hope is that every district in the state is doing a retrospective audit of what they learned and what they need to do differently, including consulting with experts, in case we find ourselves

in a similar situation moving forward," Reynolds said. "By consulting with experts to employ targeted, evidence-based e-learning solutions, they may learn some things about improving e-learning affordances offered under regular in-person instructional delivery conditions, too."

**More information:** Rebecca Reynolds et al, Digital divide, critical-, and crisis-informatics perspectives on K-12 emergency remote teaching during the pandemic, *Journal of the Association for Information Science and Technology* (2022). [DOI: 10.1002/asi.24654](https://doi.org/10.1002/asi.24654)

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