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8-2021

### Virtual Learning Trends During the COVID-19 Pandemic

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#### Recommended Citation

Darling-Aduana, Jennifer; Sass, Tim; and Woodyard, Henry, "Virtual Learning Trends During the COVID-19 Pandemic" (2021). *GPL Policy Briefs*. 33.

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# Virtual Learning Trends During the COVID-19 Pandemic

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The COVID-19 pandemic forced schools across the U.S. to switch to virtual learning. In this project, we studied trends in technology usage and virtual learning during fall 2020 in a metro-Atlanta district. Our analysis elucidates promising strategies and highlights areas for additional attention, which can help improve the effectiveness of virtual learning.

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## What did we learn?

In fall 2020, students logged an average of 14 hours per week using virtual learning applications. This was significantly less than the approximately 33 hours per week of traditional face-to-face instruction prior to the pandemic.

Usage patterns sometimes differed across student groups. Female students logged more hours using the Microsoft Teams and iReady platforms than male students. Black students logged more time in synchronous meetings than White students.

Students' weekly achievement growth during pandemic-related virtual learning was lower than pre-pandemic trends predicted.

More hours spent on virtual learning applications was associated with higher weekly rates of student achievement growth. The associations were particularly strong for applications facilitating student-directed, interactive assignments, including Microsoft Word and iReady.

## What are the policy implications?

Differences in time logged in virtual learning platforms may reflect differential access to the virtual instruction environment. Ensuring students have equitable access to the resources needed to effectively learn virtually is an important policy consideration.

Variation in technology usage is likely associated with differences in family characteristics and resources, such as the ability of guardians to provide or pay for supervision and academic support during the school day.

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## Researchers

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## Published

August 2021

## What questions did we answer?

1. How large are disparities in the quantity and type of virtual learning students experience, by race and ethnicity and socioeconomic status?
2. To what extent is student learning during the COVID-19 pandemic associated with those same disparities in virtual learning use and dosage?

## Why is this issue important?

The COVID-19 pandemic magnified pre-existing systemic inequities, including within educational institutions. Understanding student access, engagement, and learning during the pandemic is an essential first step to remedying opportunity gaps created during this era of crisis-schooling. Further, virtual schooling is projected to expand rapidly soon—even once pandemic related restrictions have been lifted. Understanding what worked well, and for whom, during a time of almost universal virtual learning will help policy-makers, educators, families, and students make decisions that best support student learning.

## What data did we use?

We use administrative data from the fall 2020 semester for fourth- through eighth-grade students. The data include logs from two virtual learning platforms: Microsoft Teams and iReady. Teams was used as a learning management program. iReady is a self-contained learning and assessment tool that can support blended instruction and teacher-directed interventions.

## What will we study next?

We intend to conduct additional analyses intended to produce more plausibly causal estimates of the effect of virtual learning. We will control for parental preferences and resources using data from a survey of instructional mode preferences. We will also examine variation in engagement and achievement growth across students within the same classroom, controlling for teacher quality and peer influences. Additionally, we will examine changes in engagement throughout the semester.

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## Want to learn more?

A report is available at  
[gpl.gsu.edu/gpl-publications](https://gpl.gsu.edu/gpl-publications)

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The **Metro Atlanta Policy Lab for Education (MAPLE)** is a component of the **Georgia Policy Labs (GPL)**, a research collaboration between Georgia State University and a variety of government agencies committed to leveraging the power of data to drive policy and programmatic decisions that lift children, students, and families—especially those experiencing vulnerabilities.

## Suggested citation

Darling-Aduana, J., Sass, T., & Woodyard, H. (2021). *Virtual Learning Trends During the COVID-19 Pandemic*. Georgia Policy Labs.