# Digital Resources and Pandemic Pedagogy

What new research tells us about how teachers are using instructional materials online



**March 10, 2021**

*This blog post is part one in a series unpacking findings from the American Instructional Resources Survey, a project of the RAND Corporation.* You can read the second post in the series **here**, *and read more about the survey* *here*.

For many teachers around the country, adapting to online and blended learning has brought a host of new challenges—from ensuring internet access to navigating new digital platforms and adapting teaching strategies to meet shifting student needs during a time of global crisis. On top of that, renewed conversations around inclusive, culturally responsive curriculum have brought instructional materials into the spotlight in new ways. It is as important as ever for education leaders to understand which materials and content teachers are seeking online, how they're curating and implementing them, and how this content serves students.

The American Instructional Resources Survey (AIRS), a project of the RAND Corporation, starts to answer some of these questions and also raises new ones. Conducted annually, AIRS helps education leaders and policymakers understand key trends in instructional resource usage and implementation. The 2020 AIRS data, fielded to roughly 6,300 teachers in spring 2020, and a second survey in fall of 2020, offer insights into how online learning shifted at the beginning of the pandemic and how some of the most common materials were being used prior to school closures. Findings show interesting contradictions in which schools have the resources to utilize digital resources and which are actually making use of them.

Survey data show generally that teachers were largely shifting to digital tools even before the pandemic, using a variety of platforms such as YouTube and online tools and resources designed specifically for learning, such as BrainPOP, Kahoot! and Quizlet. For example, the percentage of teachers reporting that they regularly use YouTube and BrainPop for their English language arts instruction in the 2019-20 school year was up by 20 or more percentage points compared to the previous year.

Many, though not all, of these resources cost money, ranging anywhere from a few dollars per student to thousands per year in licensing fees. BrainPOP's

school plan, for example, costs about $1,695 per year or as much as $250 annually for a single-user plan for individual teachers to purchase and use—a significant price tag for many schools, particularly in the midst of a pandemic.

Despite the substantial cost—and adequate internet connectivity—required to access and use many of these resources, survey findings show schools relying most heavily on digital resources are those that indicated a majority of their students rely on free and reduced meals (FARMs). Schools with higher proportions of FARMs students are typically those with fewer financial resources to purchase costly materials or the broadband to use them. According to the 2019 AIRS data, 76% of teachers surveyed from schools with majority FARMs students found internet and device access to be a barrier, while 70% found the expense of digital materials to be a significant barrier. Yet, the 2020 AIRS data show these same schools are relying more heavily than the average school surveyed on digital materials, which is similar to what appeared in earlier data sets, as described in this Data Note published by RAND regarding the 2018-19 school year.

The Fall 2020 COVID-19 Response Teacher survey, a more recent addition to the RAND survey data, sheds some light on these contradictions within the context of the pandemic. In this new COVID-specific data, teachers at schools serving majority students who rely on FARMs indicated greater difficulty in both supporting student learning and ensuring student engagement online than the average teacher. The data also show that teachers serving in these schools reported higher student absentee rates, lower student assignment completion, and significantly fewer students that are prepared to participate in grade-level work compared to the previous year. Despite the demonstrated need for additional support to address these challenges, schools with majority FARM students seem to have even fewer supplemental support provisions available to their students, which likely only

sustains the impact of these difficulties. Teachers reported an overall need for greater support in curriculum adaptation, academic lesson planning, socio-emotional sensitive teaching, improving and maintaining student engagement and motivation, catching students up to grade level as well as access to high-speed internet and up-to-date technology in order to better support their students. This indicates that greater support is needed all around, particularly since the pandemic has transitioned most schools to digital learning.

These findings may underscore the lengths that some schools and teachers were already going to for student engagement, in some cases despite the cost prior to the shift to online learning. The survey shows that these educators *chose* to use these resources; their schools and districts neither recommended nor required them. One potential explanation for the increase in digital tools despite financial hardship is that teachers see some potential in using digital resources to better address the needs of their students. Another possibility may have less to do with educators' deciding to bring in these tools to foster engagement specifically and more to do with a general desire to try new tools and new approaches to teach their lessons. Yet another possible reason for this shift may be that teachers have responded to companies and peers pushing them to use these new tools. While the spring 2020 data was collected based upon material use before the pandemic, these persistent challenges expressed in the Fall 2020 COVID-19 data may suggest an even greater reliance on digital materials and resources over the course of the 2020-2021 school year. Among the questions that remain is whether these digital materials do indeed work to better serve schools with the majority of their students from lower income households, or if this shift to digital materials is leaving students behind who may not have reliable access to the technology or internet necessary at home.

Another question, impossible to answer from the AIRS data alone but

begged by its contradictory findings, is whether funding-strapped schools are able to make these purchases only by cutting other items in their budgets, and if so, which areas are being defunded as a result of this reallocation.

In general, the survey shows that the use of digital materials is becoming increasingly normalized and that teachers are turning to individualized content separate from traditional textbooks. However, teachers also need the administrative support and professional learning to integrate digital materials into their lesson plans, the guidance to implement them, and the technological resources to ensure all students can use them—scarcities during COVID-19. AIRS highlights just how important these resources are, and how delicate the balancing act is for many who are trying to create the time and capacity to produce relevant materials on shrinking school budgets and the intense personal tax of the pandemic.

The following post in this series will explore key findings from AIRS on what these challenges look like for teachers and how they're meeting the evolving needs of students.

*Corrected at 1:10 pm ET on March 15, 2021: This blog post has been changed to correct errors related to the timing of the administration of the surveys. The 2020 AIRS survey was in the field from April 29 to June 8, 2020, and teachers who took the survey at this time were asked to reflect on use of instructional materials* before *the pandemic, not during the pandemic as would have been incorrectly inferred by the original post.*

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