Laptops and Learning: 5 Trends in K-12 Education In 5 Charts

EdWeek
Research Center

Laptops & Learning: A New Look for K-12 Education

The 1-to-1 computing landscape in K-12 has expanded at an enormous rate over the past two years. When schools shut down in early 2020, thousands of districts had little choice but to scramble to find enough laptops, tablets, and hotspots to offer virtual instruction to their students.

Today, schools with a 1-to-1 student to computer ratio are now common. This paradigm shift in K-12 education was made possible by an unprecedented windfall of pandemic-driven federal education funding, as well as the skill and dedication of educators who quickly learned and adopted new teaching tools and methodologies to keep their students on track academically.

The acceleration has opened the door for more-effective use of digital learning tools and led to more widespread and sophisticated use of technology by teachers and students. At the same time, it revealed the large gap in access to devices and reliable internet connectivity in students' homes.

But, as the lengthy pandemic school shutdown proved, simply putting devices into students' hands doesn't automatically translate into academic advantages.

Improved learning outcomes: If the plan doesn't work, change the plan, not the goal.

Districts can't typically make large device purchases without planning. They typically create a replacement cycle, swapping out a quarter of their old laptops and tablets each year and replacing them with new ones. But the federal relief money and the immediate need to secure devices and internet capability to help students learn virtually meant many districts purchased a slew of laptops, tablets, hotspots, and other technology all at once.

Now, many districts are having to develop new infrastructure and sustainability plans: figuring out what hardware they have, how it will integrate into the classroom as students return, the age and condition of their devices and where they are located.

Where and when learning takes place is being driven by affordable, durable laptop computers for learners and teachers, and this trend shows no signs of stopping in a post-pandemic world. In addition,

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data privacy and security are always concerns as are additional expenditures beyond just replacing and repairing many more devices.

More devices can also open savings elsewhere, but uncovering those areas entails a collaborative discussion. With so many variables, it can be maddening to make them all align in a way that proves effective. Bluum has done that for you. We have created a blueprint to help define a digitally responsive organization.

This framework, based on work done by the European Commission's Joint Research Centre[1], helps schools and districts evaluate their digital responsiveness and identify areas of improvement.

Every school is in a different situation when it comes to their existing EdTech ecosystem and the needs of their students and faculty. This means a one-size-fits-all approach to tech planning will not succeed.

To find out more about how to build a digitally responsive organization, check out the resources below:

(1) Promoting Effective Digital-Age Learning: A European Framework for Digitally-Competent Educational Organisations (http://europa.eu/ldV98uF) by the European Commission's Joint Research Centre. © European Union, 2015

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Introduction

The onset of the coronavirus pandemic in early 2020 altered the role of technology in teaching and learning. When educators were forced to abruptly switch to remote learning, leaders in some school districts rushed to find ways to increase their students' access to computing devices while others had already established 1-to-1 computing in previous years. Across the nation, students followed lessons and completed school assignments at home using laptops and computing devices that their parents or their schools provided. This initial surge in the use of Chromebooks, iPads, or other digital tools created unprecedented challenges and opportunities. But its longer-term impact was an open question.

As schools returned to fully in-person learning in subsequent school years, questions remained about the ways in which the increased use of digital devices during the pandemic might have transformed —or only fleetingly shifted— classroom instruction. To learn more, the EdWeek Research Center surveyed educators regarding students' current access to school-issued devices, professional development opportunities intended to help teachers integrate the use of devices into instruction, and the degree to which expanded use of devices changed teaching and learning.

Overall, 1,063 educators (384 teachers, 305 principals, and 374 district leaders) responded to the nationally representative survey which was conducted from March 30 through April 8, 2022. The results provide a window into the views of educators who have firsthand experience with current conditions in K-12 schools.

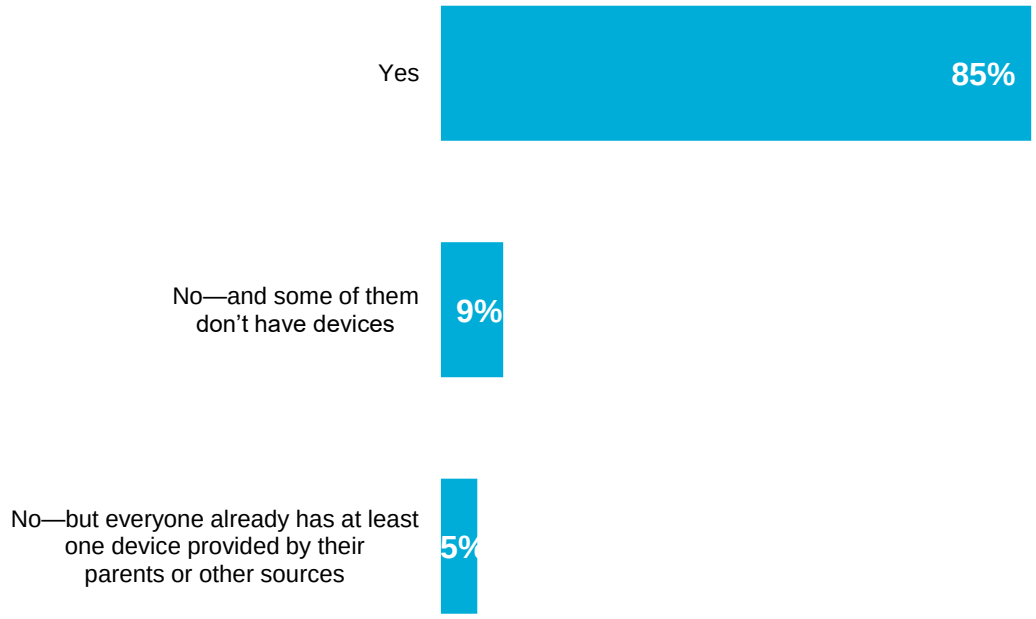
In a May 2022 special report featuring results from the survey, Education Week journalists explore the impact of 1-to-1 computing and the role of laptops in today's school landscape. This spotlight report from the EdWeek Research Center highlights five key findings from the survey data.

1. Most educators report that all their students have access to a digital learning device.

Eighty-five percent of teachers, principals, and district leaders say all the students in their classrooms, schools, and districts have a school-issued digital device, such as a Chromebook or an iPad. Another 5 percent of educators say their schools don't provide such devices but all their students have access to devices provided by their parents or other sources.

Only 9 percent of educators report that their students do not have access to a device provided by their schools and may not have any devices at all.

Chart 1. Do all the students in your classroom (teachers), school (principals), and district (district leaders) have a school-issued digital learning device, such as a Chromebook or an iPad?



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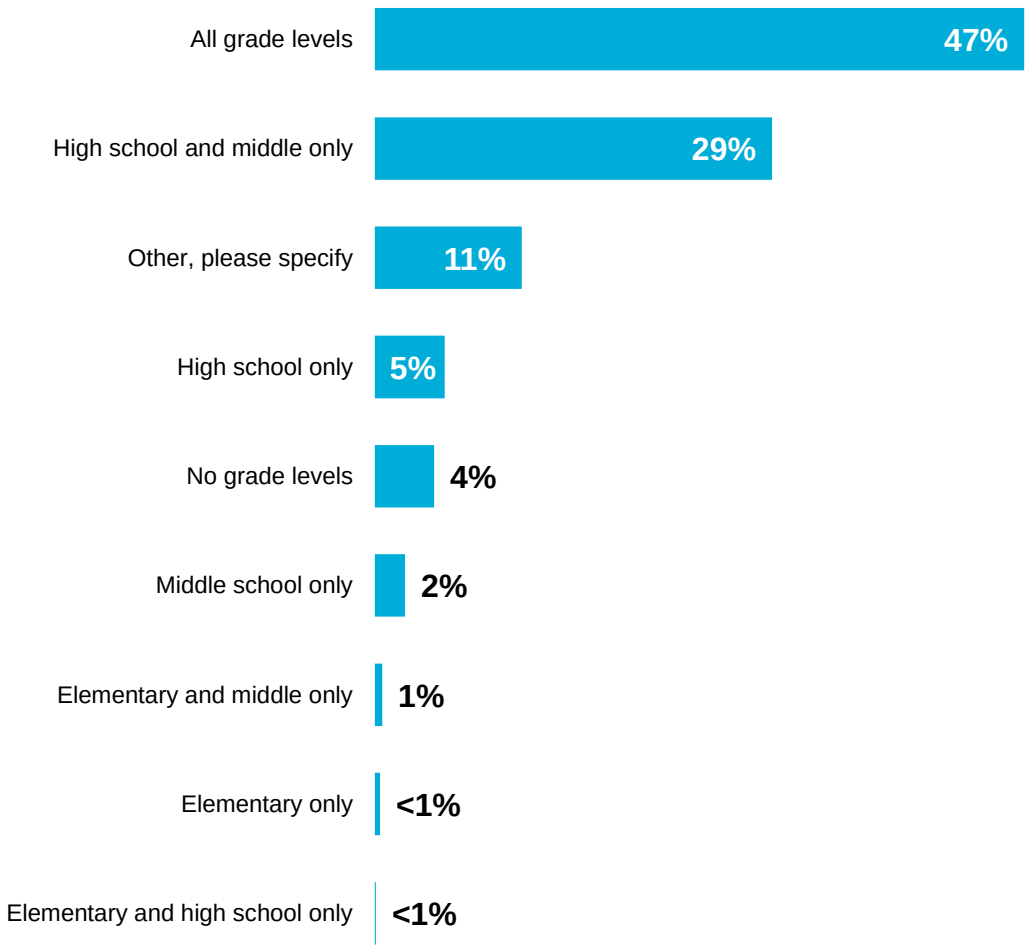
2. Nearly half of educators say that students at all grade levels can take school-provided devices home.

Forty-seven percent of teachers, principals, and district administrators say that their schools or districts provide devices for students in all grade levels to take home. Nearly 3 out of 10 say that only high school and middle school students are permitted to take their devices home with them. Only 5 percent indicate that only high school students can take their learning devices outside of school.

Due to the financial cost of such technology, there might be concerns that younger students will lose or misplace devices. Educators and parents may also worry that students in the elementary grades will get too much screen time if they are allowed to bring devices home.

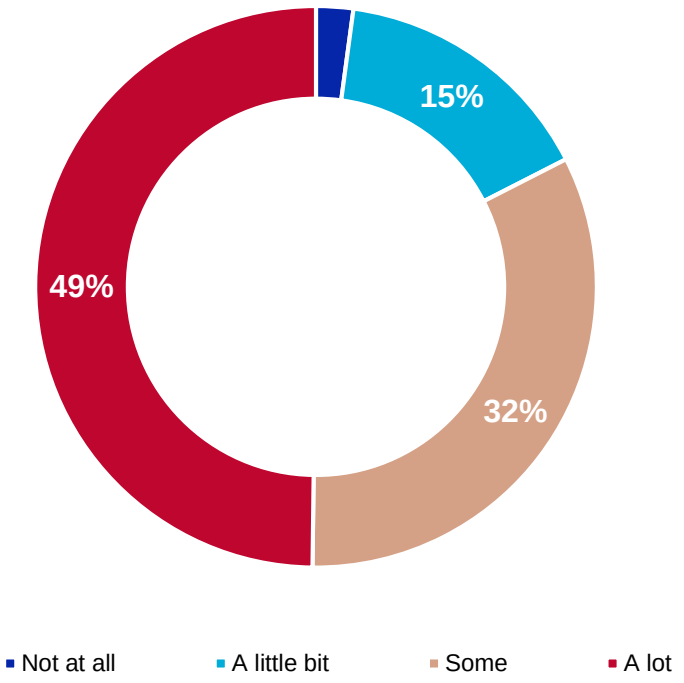
Chart 2. At which grade levels are students permitted to take their school- or district-provided devices home with them?



3. Almost half of educators say expanded use of computing devices has changed teaching and learning a lot.

Nearly half of teachers, principals, and district leaders (49 percent) say that the expanded use of school-issued digital devices during the pandemic changed teaching and learning in their schools a lot. Another 32 percent indicate that using technology like iPads or Chromebooks has somewhat changed the educational experience. Fifteen percent say teaching and learning has only changed a little bit. Just 2 percent think that teaching and learning haven't changed at all.

Chart 3. How much— if at all—has the expanded use of school-issued digital devices during the pandemic changed teaching and learning in your classroom (teachers), school (principals), or district (district leaders)?



Professional Development: Confidence Through Knowledge

Professional development to help educators figure out how best to use technology to enhance instruction has been a big focus for districts – especially with the massive shift to online learning during the pandemic. Professional development significantly enhances teaching quality, especially the quality of educational activities provided within the classroom.

Successful integration of technology into teaching strongly depends on the availability of consistent professional development programs designed with a knowledge of how educators can use the technology in their class in the best fashion. Educators are the catalyst for lifelong learning in the classroom, and therefore, need to keep up with technology innovations in teaching. Yet many educator readiness plans are insufficient and new technology gets shelved in favor of familiar teaching methods.

A recent study from EdWeek[1] stated that more than 80 percent of educators said their districts had offered training and almost half surveyed described it as high-quality. Unfortunately, the other half said it was "mediocre" or worse.

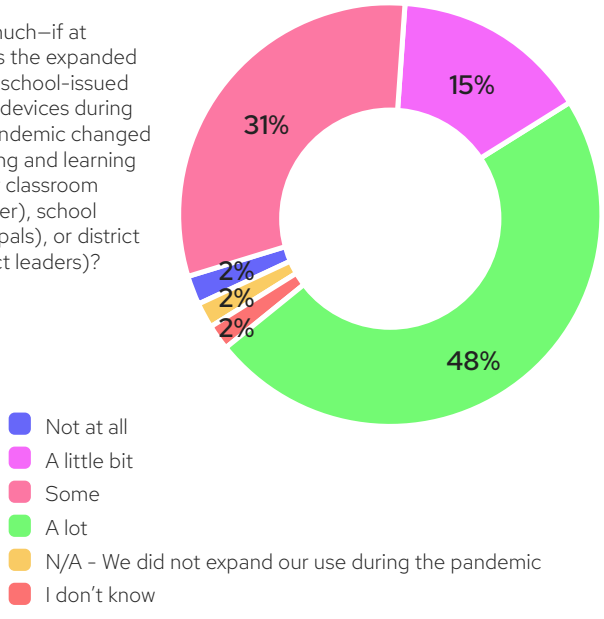
Many districts have teachers who serve as Technical Support Specialists, but finding time to learn and train new technology is becoming more difficult. In challenging times when teachers embrace remote learning and new technologies, there is no better investment than professional development. The right type of training can drive greater technology adoption and user confidence through customized Professional Development services for end-users and trainers.

The quality of ed-tech professional development varies widely

Getting the full value from technology solutions isn't possible without training and guidance for educators. Professional development builds character and confidence for those commanding a classroom. When PD focuses on the technology, it allows educators to understand how to use it to its full potential. That helps them seamlessly integrate the tech tools into their classrooms, lesson plans and pedagogy.

One of the biggest reasons new technologies are not implemented is fear of failure or inadequacy. Not understanding the capabilities means less application and integration in daily classroom teachings. When educators can train on technology, and use it more frequently and meaningfully, they bloom.

How much—if at all—has the expanded use of school-issued digital devices during the pandemic changed teaching and learning in your classroom (teacher), school (principals), or district (district leaders)?



SOURCE: EdWeek Research Center survey, April 2022

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Schools aren't going to stop investing in technology simply because students have returned to classrooms. Rather, they're continuing to invest and need to appropriately train teachers and students to see the benefits of its impact.

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If you're looking to enhance the professional development opportunities at your school, here are a few resources:

Read more about how EdTech planning can prepare your staff for digital age learning.

Discover great courses to transform teaching in the classroom with Bluum's Professional Development Catalog.

Schedule a **free consultation** with one of our PD experts.

LEARN MORE

(1) Education Week Case Study: The Hard Transition to 1-to-1 Computing Continues, May 2022

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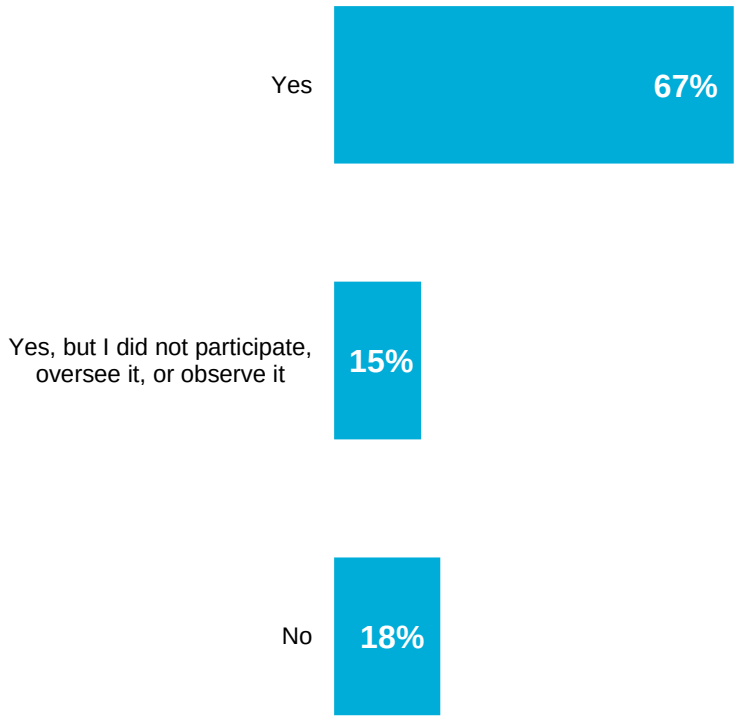
4. Most schools or districts have provided professional development to help teachers integrate digital devices into instruction.

Roughly two-thirds of teachers, principals, and district leaders (67 percent) say that their schools or districts have provided professional development to help teachers learn how to integrate the use of digital devices into instruction. Another 15 percent say that teachers at their schools or districts were provided this training, but they did not participate, oversee it, or observe it.

Still, nearly one out of 5 educators (18 percent) say that their schools or districts don't provide any professional development in this area. Although some teachers will figure out successful strategies on their own, a lack of training opportunities can potentially fuel resistance to integrating technology into the classroom or leave teachers to struggle through a trial and error process that impedes the implementation of 1-to-1 computing strategies.

Chart 4. During the pandemic, has your district or school provided any professional development to help teachers learn how to integrate the use of digital devices into instruction?

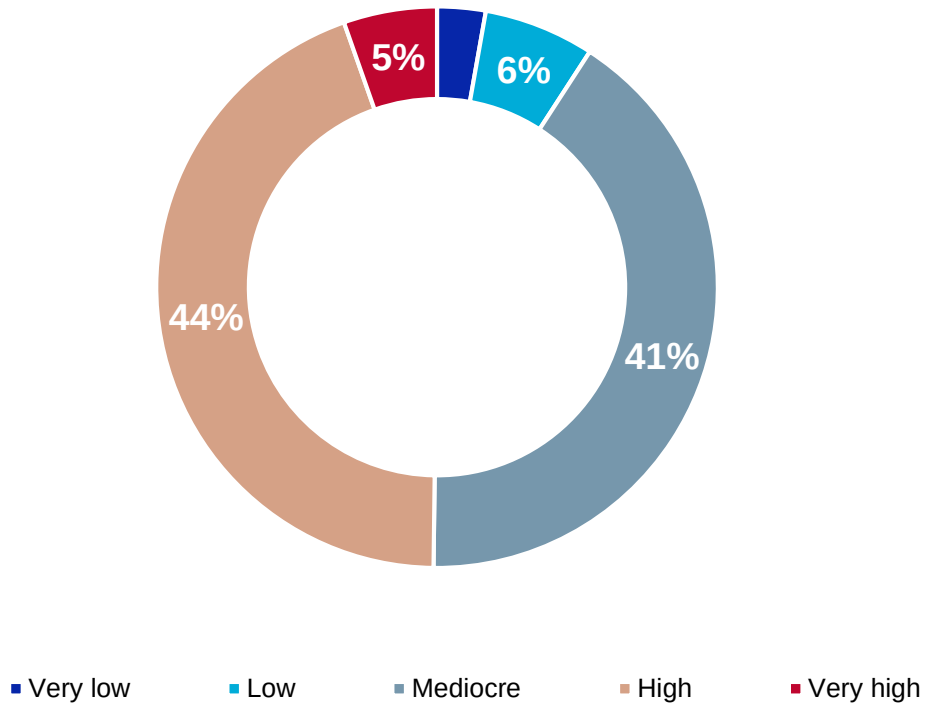


5. When it comes to integrating digital devices into instruction, most educators say the quality of PD during the pandemic wasn't high.

According to educators, there's substantial room to improve on the PD that districts or schools provided during the pandemic to help teachers learn to integrate digital devices into instruction. Forty-four percent of teachers, principals, and district leaders rated it as high quality and just 5 percent saw it as being of very high quality. Another 41 percent characterized it as mediocre.

Although just 10 percent said the quality of training on integrating the use of digital devices was low or very low, the survey findings raise concerns about future progress. When PD is seen as mediocre at best, educational technology can fall short of its promise and teacher buy-in can be imperiled. Despite widespread access to digital devices and significant changes to instruction, ineffective PD could ultimately limit technology's impact on student achievement.

Chart 5. How would you describe the quality of the professional development your school or district provided during the pandemic to help teachers learn how to integrate the use of digital devices into instruction?



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