5 Trends Shaping K12 Ed Tech
Technology is changing how teachers communicate and create new ways for students to learn. Access to the latest innovations depends on variables such as district location, administrative interest and amount of funding. But, several technologies are finding widespread appeal in urban, rural, well-funded and economically challenged districts alike.

While makerspaces, along with augmented and virtual reality have gained steam in recent years, schools and districts will likely need to make steady progress in other areas before even considering them. Education Dive lays out five ed tech trends that should be top-of-mind for all K-12 administrators as they build a solid foundation for their tech strategy.

1. **Chromebooks.** When the iPad emerged as a force in education, some well-funded schools launched initiatives to provide one for every student— a trend known as the 1:1 model. The substantial price tag of Apple’s tablet kept many public schools from making the leap, but Google’s Chromebook is changing that.

"The affordability of these devices allows schools to put them in the hands of every student," says Patrick Scanlan, Supervisor of Technology and Innovation Services at San Jose Unified School District in San Jose, CA. "It’s disruptive in a positive way."

Scanlan says his district currently owns 15,000 Chromebooks, a little under half the number of their student population.

Rural districts are also shifting toward Chromebooks as a way to provide interactive learning to students at low costs. "We’re realizing that many of our strategies, such as our LMS, are a natural fit to Chromebooks," says Scott Parks, Superintendent at Howe Public Schools in Howe, OK. "They also fit in well with the more economical cloud-based model we’ve adopted for our devices and data storage."
2. **Blended learning.** Although the term is somewhat ambiguous, *blended learning remains a growing trend in K-12 classrooms.* Blended courses offer a mix of traditional classroom instruction and online activities, readings and assessments. Ultimately, students gain the opportunity to learn at their own pace, and many emerging platforms cater to individual learning styles. While many schools are embracing a blended learning model, some are reluctant to wade too far into exclusively online courses.

"We’re looking at creating a hybrid approach, offering the best of both worlds," says Parks. "Blended learning is relationship-driven. There’s still a need for human contact and interaction, but also a need to understand the virtual world."

3. **Single sign-on and interoperability.** Providing staff and students a single gateway to access content and information from various sources, single sign-on portals are another tech trend that’s gaining ground in K-12 education. With SSO, setting up a new user in the system becomes a much quicker process. "Any platform that ties into identity access management is very helpful for school districts," says Scanlan. "When you use a one-login system, it helps ensure that students have access to what they need."

Popular SSO solutions for the K-12 arena include *Education Elements, EduTone,* and Clever’s *Instant Login.* But, SSO is just the entry point for interoperability, according to Lenny Schad, Chief Information Officer at Houston Independent School District in Houston, TX.

"We’ve moved into things like *OneRoster,* where you’re automating the rosters out to all the vendors who need that data for accessing the school," says Schad. Additional steps toward interoperability include *Common Cartridge* and *LTI,* which enable web-based applications and content to be maintained and displayed to various platforms.

"Our goal is interoperability—we want one place where teachers can go to get access to everything, no matter what type of device they’re using."
4. Wireless and cloud-based multimedia. Videos remain an integral part of classroom learning, but many of today’s teachers use wireless solutions such as Apple TV to project media to the class. "We’ve been equipping as many classrooms as we can with Apple TV," Scanlan says. "Teachers use it to go over lesson plans with students and play instructional videos, and students are able to connect and give presentations from their own devices."

Wireless interactive systems such as Cisco’s Spark, which creates a virtual space for messaging, videoconferencing and interactive drawing, are also gaining ground in some school districts.

5. Internet of Things (IoT) devices. IoT devices are a growing trend in the K-12 space, especially those related to security and energy efficiency. Sensors can collect data and automatically regulate energy usage, lighting and HVAC systems, which results in cost savings for many districts. And IoT is a valuable tool for ensuring campus and school bus security, according to Parks.

"We have GPS location tied to live streaming video and the ability to conference into each bus in a non-intrusive way," he says. "Those are wonderful tools to have if we’re facing a crisis situation." The connected bus is also useful for analyzing route decisions and evaluating safety concerns.

Some schools are also pulling IoT technology into the learning process. High-tech greenhouses provide students with opportunities to observe and analyze data as they monitor a plant’s growth, and wearable devices such as the Muse headband offer teachers the chance to monitor students’ cognitive activity. In the future, Parks hopes IoT and other education tech will help students discern real-life applications for the skills and concepts they’re learning.

"Assessing data and using it to drive decisions is one way to teach students to solve real-life problems," he says. "In the future, I see a continued shift toward applied learning and an emphasis on STEM, computer science and robotics."