You're 1:1... Now What?

White Paper

Scott Sterling
Education Writer

Introduction: The Growth of Devices and 1:1 Schools

In the United States in 2015, schools bought 8.9 million devices, in part to feed the growing trend of putting a device in the hands of every student who walks through the doors. 1:1 device initiatives are also growing; according to Project Tomorrow CEO Julie Evans, a recent survey among district chief technology officers revealed that 27 percent of districts were at least in the process of achieving a 1:1 device ratio – up from 20 percent just a few years ago.

This guide is not for the remaining 73 percent, although there is bound to be some value in it for those still in the 1:1 consideration phase to see what the future may hold. This guide is for the education leader who is in the middle of 1:1 adoption, who just had hundreds of devices delivered and is now wondering how to make the best use of them.

First, we'll talk about your technology ecosystem as a whole. Few schools and districts have the resources to jump into 1:1 in a single adoption cycle. They tend to mix and match devices as budgets allow or open the school to a Bring Your Own Device movement. What are the considerations when running a heterogeneous device ecosystem and how does that affect the decisions that come later?

When you add hundreds of devices to your school, the infrastructure must be considered. What will 1:1 do to your bandwidth? Printing? Electricity? To achieve maximum effectiveness in the classroom, those concerns need to be minimized.

Teachers in schools who were early adopters of 1:1 often say the same thing: we wish we would have received more training to better utilize our tools. What does that training look like? Can even the most tech-averse teacher be converted?

Devices are useless without the right education content. What are the goals we want to reach with our students? How do you know what software to look for? What should that review process look like?

Finally, we get into a primary concern of all 1:1 adopters: making sure student use is appropriate and educationally-relevant. This becomes even more of a challenge if devices are going home with the students. What are some best practices when drawing up an acceptable use policy?

One thing is certain; as the world itself moves closer to a 1:1 device ratio, it is only a matter of time before every school meets that mark as well. But with prudent planning and a vision of your site's future, you can transform the instruction that is occurring in your classrooms.

Homogenous or Heterogenous? – Mixing and Matching Devices

There are definite benefits to maintaining a network ecosystem made up entirely of one brand and type of device. Most of those benefits come on the administration side. Each device manufacturer has specialized software to maintain their systems – usually remotely. Teachers and curriculum supervisors also don't have to worry about adopting software that works on one ecosystem but not another. For example, Windows apps may not be available for Apple's iPads or vice versa.

But a homogenous ecosystem is rare in the education space. The vast majority of device ecosystems in education feature a melting pot of brands, code languages, and servers.

Solutions for the issues that come with a heterogeneous ecosystem often reside in the networks and servers, not on the devices themselves. For example, security is handled by connection servers at the school or district level. Acceptable use policies can be used to lay out the consequences, even if a student is using their own device. And a thorough software/app approval process can make sure programs are being used that work for the largest swath of devices.

Infastructure Concerns

Project Tomorrow's Julie Evans reports that 46 percent of district technology officers believe their network bandwidth is sufficient, but the occasional connectivity issues crop up. This makes sense. When new devices are being added to networks hundreds at a time, resources are going to be strained.

That being said, connectivity in the nation's schools has never been better. According to a 2009 Department of Education report, 97 percent of US schools have high-speed Internet access somewhere in the building. The question then becomes having enough bandwidth, as well as the necessary wireless and wired connection points. Nothing can derail a lesson faster than students having connection issues.

You also want to make sure there are enough power outlets available. Surge protectors are the obvious solution. But also, during your next furniture adoption consider chairs and desks that have outlets built-in. These can make sure lessons take place in the appropriate areas of the classroom, not with students huddled around one or two outlets.

Teacher Training and Professional Development

After a school's first year with a 1:1 device ratio, the comment heard most from teachers is that they wish they had received more training on how to best use their new wealth of technology. Although the teaching workforce is becoming younger with every passing school year – and those new teachers bring with them their lifelong technology experience – no teacher knows all the tricks of embedding technology in their lessons.

One solution lies in the content you select for the devices. Regardless of the technology purchased, teachers need guides and lesson plans, if not in-person training. Even though today's incoming teachers are digital natives, there is still a lot of confusion about how to integrate technology into lessons – to the point where education technology should have its own branch of pedagogy. That support can make the difference between devices being used every day and only being pulled out for the most rudimentary tasks, such as writing reports. When a teacher receives a technology tip in the middle of a lesson plan, they are much more likely to use it. Some companies offer professional learning that goes beyond how to use the technology; it takes a deeper dive into how to build the new program into your lessons each week. And that can make a transformative difference on student engagement and success.

Foster a school culture of sharing best practices. Some teachers will be more inclined toward creative uses of devices in their classrooms. Make time and resources available for those gurus to share their knowledge with their more reticent cohorts. Consider setting aside time for an "ed tech camp", a freeform inservice with no set agenda other than to share technology ideas.

Finally, even though budgets are still tight, consider sending a representative or two to one of the multitudes of education technology conferences around the country. Because ed-tech is such a booming business, there's probably one not far from your site.

Finding the Best Content

As mentioned in the previous section, education technology has become a $10 billion business. That means there are plenty of options for software and apps to use with your student devices. How do you narrow down the possibilities?

One of the most influential benefits of bringing a 1:1 device ratio to the classroom is that every student can receive an individualized learning experience. You want software products that facilitate that process. The more adaptive the content, the better.

With those personalized experiences also come more insightful assessments that not only power what happens in the software, but should also be able to be used by the teacher to inform his or her in-person instruction. If the reports can also provide lesson ideas based on the class's current skill set, even better.

Devices are useless without the right content. What are the goals we want to reach with our students? How do you know what software to look for?

Any software should also be aligned to your school or district's applicable state standards and scaffolded correctly for those learning goals. When embedding a lesson with technology, a teacher should be able to point to the exact standard that part of the lesson addresses. Content should be vetted thoroughly for accuracy and ease-of-use. Teachers should resist the urge to slide in every tech tip they find on social media or the Internet, or at least proceed with caution. A uniform user experience is ideal, otherwise class time is wasted by students trying to figure out where to go next in the software – and becoming frustrated in the process.

There are, of course, other factors, but most of those align with existing adoption protocols that are used for everything from textbooks to desks. But to address the specific concerns of classroom technology, a separate adoption and review process should be implemented. This process should be used for both paid and free software applications.

A Prospective Software Approval Process

Many districts utilize a committee approach for approval processes. Although that is a thorough procedure – especially if the adoption calls for a significant capital outlay - sometimes there isn't enough lead time for a teacher's idea to snake through the committee. Education technology is moving so fast that new ideas are appearing every day. Instead, district technology personnel, curriculum leaders, and teachers can use the devices at their disposal to speed the process along. Here's a sample:

1. Teacher hears about a cool new app, lesson, or website, either online or from a colleague. Teacher submits app to appropriate curriculum leader with justification, including prospective lesson plan.
2. When approved, curriculum leader submits app to district technology personnel for clearance.
3. District technology department vets software for compatibility with other systems, security concerns, and student privacy safeguards. For some privacy guidance, check out the Student Privacy Pledge.
4. If everyone does their part efficiently, this process can be completed in 24-48 hours.
5. Annually, technology and curriculum departments should review any issues – positive or negative – that occurred related to software in the previous school year.

Student Appropriate Use Policies

The online world is a valuable place for our students, but it's not without dangers. Thinking about those dangers ahead of time (especially if the district is providing the devices needed to go 1:1) can go a long way toward making the journey rewarding for all. In this case, thinking ahead means setting out common sense policies that provide both freedom and protection for students.

Students can be very diligent when trying to access things online that are inappropriate, even on secured school networks.

Security

First, check to see if your state or district already has a blanket acceptable use policy that you can adopt or borrow from. Other districts also publish their policies on their websites. Imitation is the sincerest form of flattery.

Students can be very diligent when trying to access things online that are inappropriate, even on secured school networks. No network-based security is perfect. That's why acceptable use policies should closely align with existing codes of conduct. Therefore, students understand the expectations and consequences of improper technology use.

Make sure you consider existing policies – including those against bullying, which is common online – when adopting rules and guidelines for device usage.

If district-owned devices are going home with students, you naturally lose a certain degree of control over the device. Device-level security is usually paramount here, but make sure your acceptable use policies cover expectations for devices while they are off school property, including damage, insurance deductibles, and theft. The remedies for those situations need to be made clear.

A Vision of the Future

The nearly 30 percent of schools currently operating under a 1:1 environment are trailblazers. They will no doubt be steadily joined by other schools and districts as devices become more ubiquitous in our daily lives. To be sure, this is a positive development.

The world of college and career will require a level of technology skills never seen out of our students before. They need to be able to compete with other countries willing to invest in devices, software, and the infrastructure needed to go 1:1. Not to mention that these are children who have grown up with technology. It is the most effective way for them to interact with knowledge and information.

With the right plan, one that properly vets content for maximum effect and trains teachers to leverage technology for the most benefit, the advantages of a 1:1 environment far outweigh the costs and the risks.

For more information, contact Classworks at 888.841.4790, email info@classworks.com, or visit www.classworks.com.

About the Author

Scott Sterling is an education journalist and commentator with five years of experience in Title I education. His work has appeared in the New York Times, Education Week, District Administration, and other digital outlets. He is based in St. Petersburg, Florida.
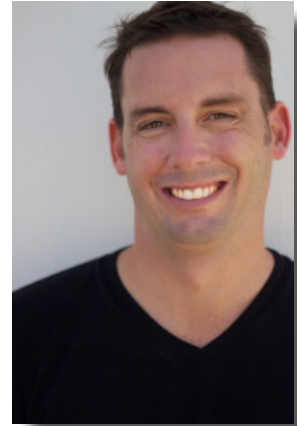
Scott Sterling
Educational Copywriter and Editor
Case Studies | White Papers | Blogs | Website Copy
Educationcopywriting.com

About Classworks

Classworks is an online instructional and assessment solution proven to help students become critical thinkers and independent learners. Classworks offers K-8 math, reading, language arts, and science instruction as well as assessment and productivity tools. Classworks provides both on-grade level classroom instruction and individualized instruction that is flexible, powerful, and drives student growth. Classworks results-driven, engaging educational solutions are built upon strong instructional pedagogy and technological innovation.

For more information, please visit www.classworks.com, contact Classworks at 888.841.4790 or email info@classworks.