



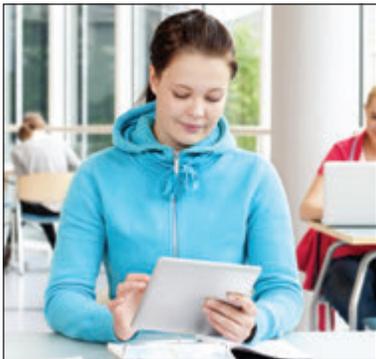
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What keeps CTOs up at night?

Data, BYOD, and Wi-Fi pose problems

By Bridget McCrea

Short-staffed, budget-beleaguered tech departments have a lot on their plates right now as they juggle schools with more devices and applications than ever before with the need to keep security tight.

We recently spoke with a handful of chief technology officers (CTOs), including panel members who participated at a recent TCEA session on CTO challenges, who shared the key challenges they are currently facing, and offered up some solutions for handling these obstacles.



Offering tech support to BYOD tools is one CTO worry.

1. Keeping data—and students—safe.
Steve Young, CTO at Judson Independent CTO, page 22

PARCC testing's highs and lows

By Bridget McCrea

When teachers, students, and administrators at Sheridan School District No. 2 met earlier this month to kick off the Partnership for Assessment of Readiness for College and Careers (PARCC) testing, they had felt pretty sure of themselves. After all, the Denver-



Testing, page 14

PBL means a deeper dive

Project-based learning accelerates and enhances lessons

By Ashleigh Schulz

If you're doing it right, most project-based learning will hit every area of the curriculum, whether it's social studies, math, reading, or even technology. Any part of the curriculum can shine whenever kids are taking a hands-on approach to learning, because they're not just sitting at a desk listening to you preach. They're the ones doing it themselves, which means they're kind of assuming that role of the teacher.

For much of my 13 years as an educator, I was in a traditional classroom. But for the past two years I've really started to incorporate PBL into my fourth- and fifth-grade gifted students. I teach an enrichment class one day a week, where we accelerate and enhance the curricu-

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Why overwhelmed educators should stick to these simple tech tools

Tech is shifting faster than teacher training can keep up. The solution is to keep it simple

By Denise Jaffe

I recently had the pleasure of spending a few hours in a friend's classroom, where I introduced her students to technology applications that would engage them in "showing what they know" at different points in their learning. Having worked with this teacher for many years, I had always considered her a technology pioneer.

So it came as something of a surprise when, planning for our time together, she confided in me that she no longer felt empowered by technology so much as overwhelmed by it. Looking back, it's easy to see how this could have happened.

When our new wireless network went live early last year, the choice of which applications and technologies to use was no longer limited by bandwidth issues. Our board of education then announced we were now a bring your own device (BYOD) district, but did not provide the professional development time to support this initiative. My friend was overwhelmed by the plethora of tools available. She needed guidance on selection and advice about where the potholes were in introducing these tools to her students. She knew enough to know there are always snags when technology gets introduced but no longer felt confident in navigating those snags.

We talked further about her students, the curriculum, and what I could do to help. At different points in my coaching practice I frequently rely on the SAMR and TPACK philosophies. SAMR, developed by Dr. Ruben Puentedura, in association with Bloom's Taxonomy, assists teachers in designing tasks that have significant impact on student outcomes along a logical, nonthreatening continuum. The ultimate goal is to encourage teachers to create lessons and tasks for students that are unique to the technology

and inconceivable without it. TPACK—Technological Pedagogical Content Knowledge—is a framework that focuses on the interplay between content, pedagogy, and technology. TPACK works to ensure the development of effective technology-enhanced lessons.

This situation, in addition to SAMR and TPACK, largely called for simplifying the selection of tools and distilling them down to meaningful choices. To assist her selection of appropriate technology tools, I offered three suggestions. I then provided four tool types that we would introduce to her students during the semester. Of course, once she and her students became comfortable with these tools, they themselves could better select where each tool might work.

The three suggestions were as follows:

Select apps and tools that are not device-dependent, meaning, students can get to the tool and create it regardless of whether they are using a PC, MAC, iPad, or Android. This considerably cuts down the options, but will be appreciated in the long run.

Understand the difference between free and freemium. This is not always easy to decipher. The best approach is to create an account and then follow the product process to completion. It does not have to be perfect. Then, learn how you share it as a free option. Many tools allow free creation but then require payment to publish or share.

Always check the Terms of Service (TOS). If the minimum age is 13 in the district today, it can be blocked at any time and become unable to be reopened. The filters do not catch everything, but if/when they do, there is no recourse if the TOS has an age requirement.



Simplify your selection of technology tools

Presentation Tools: In light of Common Core English Language Arts Anchor Standards, these are most often requested in our district.

I recommend **Google Presentation**, Prezi, and PowToon. It is time to move students away from PowerPoint while still using the linear reasoning that PowerPoint offers. Additionally, each tool looks and behaves much like PowerPoint, which makes the learning process easier.

Google Presentation does not have the bells and whistles of PowerPoint; however, its ability to reside in the cloud, and counting in the new add-on options, research menu, sharing, and comments, far outweighs its shortcomings. Additionally, students can upload any PowerPoint presentation and keep the original theme in Google Presentation. Prezi can be accessed by students on a PC, Mac, and iPad. It has a three-dimensional, infinite canvas that allows the creator and user to zoom in for details and out for the big picture. Many students enjoy the open spaces, and you can add text and multimedia items, like photo, video, and audio files. PowToon is both a presentation tool and a 2D animator.

Collaboration tools: Google Docs, VoiceThread, and Padlet can work to provide transparent ways for students to show what they know and have fun doing it. As a Google Apps for Education dis-

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How a challenge-based model can improve teacher development



Tom Daccord

“I can’t do that.”
“Are you serious?”
“No way.”

These are just a few of the comments I’ve heard at the beginning of one of my professional development workshops.

You see, whether teachers are learning to teach with iPads or Chromebooks or Windows Surface tablets, I typically begin an EdTechTeacher workshop with a challenge, or a set of tasks I expect them to complete within a limited amount of time.

In the case of an iPad workshop, I might have 12 tasks that I ask them to complete in, say, 20 minutes, or perhaps six tasks in less time. These tasks typically involve some basic but also some intermediary or even advanced uses of the iPad, such as taking a picture, creating a 30-second movie, or pasting and speaking sentences in Open Notes.

For many who are new to the iPad, or new to a Chromebook or some other device, these challenges can be daunting. And even those who have intermediary or advanced knowledge of these devices often don’t know how to complete all the tasks.

So, the immediate reaction is, “I can’t do this,” or “Why aren’t you simply showing me how to do this?” But, invariably, everyone completes the challenge—and a few exceed the allotted time.

I could start my workshops by showing teachers how to find and do everything. I could lead them through a step-by-step, do-what-I-do tutorial of various apps—“point here, click there”—and teachers could simply watch what I do. But the problem with that approach is, by the end of the workshop, it creates a culture of dependency. The instructor ends up the center of the learning, not the students, and disseminates information to a mostly passive audience. I’m simply not empowering them to learn if I’m at the center of learning.

Instead, I want teachers to succeed in challenges themselves. It’s perceptible how teachers’ confidence improves in just the first minutes of a workshop when they can solve a problem.

One important consideration is that I allow teachers to work in groups, so they can help each other. (My one rule is that they cannot touch another’s screen). In that way, I am encouraging student-to-student collaboration, and no one is left learning alone. I also walk around the room, so I can provide individualized, small-group, and just-in-time instruction. Mind you, I don’t tell participants how to complete a challenge, but I will give them a few hints.

At the end of the introductory challenge, I point out to the participants that I didn’t teach them anything, but they learned a lot. And they learned by actively engaging with the device. They learned because they failed, and then they figured out how to succeed. And by failing early and often, they’re developing a foundation for tackling ed-tech challenges on their own.

Throughout my workshops, I gradually increase the complexity of these challenges. By the end of the day, some of the challenges are designed for intermediary or advanced users. But the participants by this point have developed enough knowledge and confidence that they can handle these tasks, even though I’m not telling them what to do.

And that’s really my goal: I want them to leave feeling empowered that they can tackle technology challenges when I’m not around.

It’s hard to put teachers in situations where they’re uncomfortable, anxious, or afraid. Many teachers come into a workshop with some trepidation, a lack of confidence—or even outright resistance. But some of those same teachers who at the beginning openly voiced their displeasure—I had one who told me I shouldn’t get paid for my work-

shop, because I wasn’t actually showing her how to do anything —

have come up to me at the end and said, “Yeah, that actually was a pretty good idea, making us do it by ourselves.”

By creating an experiential, active learning environment, where teachers are deriving knowledge and developing strategies by doing, I’m simulating an environment I hope teachers might emulate in their own classrooms. Providing students with a challenge, giving them a time limit to complete it, and having them work in small groups is an ideal collaborative learning environment for using technology.

Presenting students with a question, a task, or some inquiry-based challenge, where they really have to think, reflect, and work with others, can develop their critical-thinking skills and help keep them on task. This kind of active learning environment also allows teachers to circulate among their students, providing individualized attention and just-in-time support, and it enables students to work at their own pace. For those who work through the challenges quickly, I’ve prepared advanced or bonus challenges, so they’re challenged at an appropriate learning level.

The real challenge for teachers is not learning technology. It’s developing a mindset that they can progress and ultimately succeed in using technology. Though they’re bound to fail occasionally, it’s understanding that the best technology integration specialists have failed early on themselves. It’s only by overcoming failure that you develop solutions and a growing confidence that you can tackle future challenges. 

Tom Daccord is the director of EdTechTeacher (www.edtechteacher.org), a professional learning organization.

Tools

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trict, collaborating and commenting on documents have become daily practice in most classrooms. Assigning peer editing jobs for students working in groups, learning to be critical and to work together far beyond the classroom walls are some of the basic tenets of Google Apps. VoiceThread (Edu) allows teachers and students to upload media (pictures, videos, text) into a virtual slideshow and then invite others to comment and participate. Visitor comments can be in the form of text, audio, or video—it can even call your phone to receive a voice comment. VoiceThread (we subscribe to VoiceThread EDU) is engaging for the creator and the commentators, because it offers several ways to connect with the “thread.” Padlet is a virtual corkboard that can be shared privately (or publicly) for students to post to—and is by far the easiest tool on the cloud for connecting students. Posts can contain video, images,

text, or documents. It is available on all devices, is easy to learn, has no email needed, and supports all levels of Bloom’s Taxonomy.

Communication tools: Online communication lets students test their opinions, hear other’s thoughts, practice communication through writing, and expand their knowledge base. Google Groups allow classrooms to have online discussions around classroom topics in a controlled environment. All participants must be invited into the group and have a district e-mail account. Students can initiate and respond to prompts and/or their peers. EduBlogs (we have a campus license) or other blog platforms allow the conversation to be extended to a more global audience. Comments are moderated by the blog owner(s) before they are made public.

Curation tools: Curation involves critical thinking, as students synthesize and evaluate resources to make learning connections and answer essential questions. Content curation includes search-

ing, selecting, analyzing, evaluating, annotating, and sharing resources. Mind maps (graphic organizers) are essential in assisting with brainstorming structures for information. MindMeister is my first pick. It is multiplatform, incredibly easy to use, and free, enabling sharing and exporting. Infographics (information in graphics) are also excellent synthesizing tools. They aid in visually chunking information efficiently. I suggest PiktoChart or Glogster. Lastly, for a place to house resources in a single location, I recommend Google Sites.

The tools discussed above also cover critical thinking, global issues (making it real), and creativity. Once students understand the buffet of options, they can mix and match the tools for most projects. This knowledge will also scaffold the selection, learning, and use of additional web tools. **eSN**

Denise Jaffe is technology integration facilitator at West Hartford Public Schools in Connecticut.

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PBL

continued from page 1

lum. When I was a regular ed teacher it was a little harder, because you have the mandate of the curriculum. But being the gifted teacher allows me to have project-based learning for pretty much everything I do. The kids really get to take control, and dive deep into these projects, which can last up to an entire semester.

I have some guidelines that I set up at the beginning of each unit, but I try to let the students take control and steer it in the direction they want to go in. This year we did a huge unit on inventions. We read books on the subject and students researched an invention that interested them. As a class, we started by looking at different catapults, and students took them apart and put them together, just to give them an idea of how things work. Then they set about making an invention of their own. I told them I didn't care what it was, but it had to be something that had not been invented yet. At the end, they created a multimedia project and presented their invention to the class.

My students wanted to make their own inventions, but they weren't working in isolation—most of it was teamwork. In reality, perhaps 20 percent of their time was individualized throughout the whole project. A lot of the time they were asking for feedback: "Hey, I can't get this to work. Can you help me?" "What do you think about this?" It's a loud classroom, but it's work being done whenever you come in.

I give students a lot of freedom when they work together but I still have to keep tabs on them. As the one adult in the room, that can be hard. Sometimes you walk up to a table and the students just look at you—they don't know if they can continue talking, if they're on the right path, or if they can get you to fill in the blanks for them. Instead of poking my head in table to table, I use a tool called FlexCat, which is designed for small-group collaboration. Basically, there's a headset with a microphone that I wear and several speakers, or pods, that you can set at



Any part of the curriculum can shine whenever kids are taking a hands-on approach to learning.

each table. I can press a button and listen to what each group is doing at any given time without them ever knowing I'm listening. It's two-way communication, or I can just eavesdrop. It feels more like there are six teachers in the room, rather than just me bouncing around from group to group.

Since PBL is about real-life scenarios, I like to have them do things like artist studies, where we may take an artist, whatever their medium, and really study and immerse ourselves in it. We've studied the Louisiana artist George Rodrigue and students tried to emulate his Blue Dog paintings, as well as those of Kandinsky and Pollack. We're also in the middle of a huge project on Japan. We took a close look at the Japanese tea ceremony, and then created our own Japanese tea bowls out of clay molds, which gave them a chance to learn about how strict the ceremonies and rituals are, and try it for themselves. Students are also creating multimedia projects about an aspect of Japan that they think they've connected with or are concerned about or even something they admire. That's really one of the things I look for in a project: I want students to be submerged in whatever unit or topic we're working on. They may drive and steer it, but I want them to get completely immersed.

Our district has a 3D printer, so anytime the students need to print something

it can be brought to our classroom. I work very closely with our district technology office, so it's really very easy. There are a lot of different online programs you can use with the 3D printer to create mockups. Since I'm working with younger kids, none of the mockups we used were really that in-depth, but I have seen some very detailed ones where you can actually design models of homes. My kids mainly used it to create a piece for their invention, or just for the experience of pressing print to watch something come to life. Next year, I'm working on building on our inventions unit by letting students experiment with robotics and coding.

I'll also be looking into those 3D printers you build yourself. It's not necessarily a robot, but it lends itself to figuring out how pieces fit together and gives them a sense of responsibility—if it breaks, let the kids find out what's wrong. It's my belief that we don't need students graduating from school who can just create PowerPoints; we need kids who can fix computers. We need kids who can troubleshoot, and not have to call the tech department. Every day I try to get my students to move beyond that mindset of, "I'm a student sitting at a desk" to "I'm an active participant in all areas of the classroom." 

Ashleigh Schulz is a gifted teacher at Calcasieu Parish Public Schools in Louisiana.

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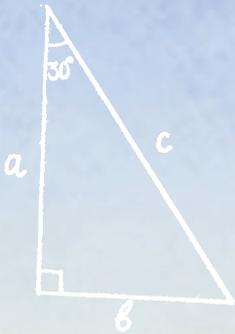
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An unconventional district gets an unconventional leader

By Jennifer Welch

Dr. Nivea Torres has held a variety of roles during her 23 years as an educator, from teacher to bilingual coordinator to elementary school principal. The variety of experience likely comes in handy as she juggles the various moving parts in her current role as superintendent of the Connecticut Technical High School System, a rather unusual district. CTHSS is actually a statewide system of 17 technical high schools, an alternative education center, and two adult schools of aviation, funded in full by the state of Connecticut.

“I was drawn to this district because I was very intrigued by this model of instruction,” explained Torres. “It’s a very project-based approach to learning that’s very different from the traditional model of lesson delivery and instruction that students receive at comprehensive high schools.” The district is career-focused, with 33 career pathways for more than 10,000 students.

eSchool News recently sat down with Torres to find out more about her experience at the helm of CTHSS, and technology’s role in the technical high school setting.

eSchool News: *As an educator, what is it about the career prep model that excites you?*

Dr. Nivea Torres: I think as an educator, we want students to graduate with a strong academic background, and at the same time to have problem-solving, team-building communication and competitive skills, and I clearly see that this model really works for kids. We have a lot of kids who are a testament to that who are very successful entrepreneurs now.

eSN: *Is it common for your students to go straight into the work force or into business for themselves?*

Torres: Over a third of our graduates are gainfully employed, and over 50 percent of them go into some form of higher ed. I think that’s a testament to the work

we do here. Our core vision is to provide that world-class career and technical education. It’s very different from a career and technical education class at a local district where you explore career options. Our goal is to make sure that kids are gainfully employed. We work very closely with the department of labor. So this is an occupational program versus a non-occupational program.

eSN: *What is it about this type of occupational model that’s attractive to students?*

Torres: The students attracted to this model have an affinity for project-based learning. This is really STEM learning at its best. We like to say, as a technical high school system, that STEM instruction is not separate and distinct, but STEM is really a form of instructing here. It’s what we do on a day-to-day basis. It’s really allowing our students the opportunity to engage in problem-solving, critical thinking.

eSN: *What are some challenges that are unique to overseeing a technical high school district?*

Torres: Our biggest challenge is our ability to pivot and be able to respond quickly to the emerging needs or trends within industries. For example, now we see this resurgent need for folks who are trained in manufacturing, and we have to respond to that as quickly as possible. We can’t always do that because that means that we need to retrofit or create a new program, and that can be challenging.

The other challenge, closely linked to that, is our ability to project three to five years ahead. We look at our state’s department of labor statistics, and also at national statistics. What are businesses going to need here or nationally? That’s incredibly challenging, and both of these issues are very unique to this kind of system.

eSN: *How does that compare to STEM learning that takes place in a traditional district?*



Dr. Nivea Torres

Torres: It’s not confined to a specific course. It’s what is achieved on a day-to-day basis. Our teachers do a fabulous job of integrating technology into the education via science, technology, engineering, and math. So, when you think about all of the things that appeal to students and their parents in this particular economy, to see that once students leave here, they could potentially be earning anywhere from \$18 to \$20 an hour in a field like manufacturing. For an 18 year old, that’s huge.

eSN: *I imagine that the way that technology is integrated and deployed is very different at your district than it would be at a traditional high school. Whereas most districts are focusing on district-wide one-to-one initiatives, are your technology needs much more specific?*

Torres: We are also doing the one-to-one transition for our academic-track students. We started implementing that model this year at Kaynor Tech in Waterbury. But overall, technology plays a very different and active role in our district. We have over 33 career pathways, and technology is used in a variety of ways in each one.

For example, we’ve invested over \$10 million in renovating and updating

our manufacturing machine equipment. If you look at our sustainable architecture program or carpentry program, technology is used for blueprint reading or to design a home or to create a roof. If you look at our digital media shop, technology is used there to produce sound and images.

eSN: *With all these different needs in all of these different programs, how do you ensure that the students are getting to use the technology that they'd be using out in the field? How do you prioritize within the district which upgrades get funded?*

Torres: We have a coalition of business and industry partners. At each of the schools we have what we call a trade

ings a semester. Soon we'll be having a career recruitment fair with different industry partners so they can get access to our talent pool and help us with job placement.

We also have many business and industry partners who come into the school and serve as mentors and guest speakers, providing that perspective to students. And then the most important partnership is our work-based learning program, where all of our 11th- and 12th-grade students get placed within a local business so that they can have access to that full experience of working out in their industry. And there's no way that we could do that without our business and industry partners who partner

Over a third of our graduates are gainfully employed, and over 50 percent of them go into some form of higher ed. I think that's a testament to the work we do here.

advisory committee. Those are folks from the field who can really help us get a better understanding of what is needed out there so that our program really emulates and aligns with business and industry expectations. And based on that, we review our curriculum. We prioritize our purchasing because there are areas that need more updated equipment than others. We also have a lot of support from the state. We are a completely state-funded system. We work very closely with our sister state agencies to ensure that we have access to bonded monies to update equipment. So, for example, the \$10 million in manufacturing upgrades was an allotment that we got from the governor and the bond commission, because they truly understand that we play a pivotal role in workforce development in the state.

eSN: *It sounds like the relationship that you have with business in the surrounding communities of each of your locations is probably pivotal to your program's success. Is there a lot of interaction outside of the trade advisory committee?*

Torres: Those partnerships are very active. Our teachers and principals are responsible for coordinating two meet-

with us and help us create those placements for our youngsters.

eSN: *Do you have any advice for superintendents at traditional districts who are looking to implement a more career-focused program at their district?*

Torres: You need to take the time to identify the needs of your local city. You shouldn't be starting a career and technical education program for which there's no career pathway. Right now manufacturing and information systems technology are great for our district, but we started phasing out fashion merchandising and fashion design statewide because labor projections really don't support that. So my best advice would be when starting a program, you really need to understand the unique needs of that community. You want to be able to prepare students to move directly into a job or a career in the future. That should be the ultimate goal. **eSN**

Jennifer Welch is a freelance writer based in Brooklyn, N.Y.

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New Ed-Tech Awards Program Honors Collaboration Between IT, Curriculum Teams

Collaboration Nation, from eSchool News and CDW-G, will recognize outstanding examples of cross-department teamwork

In his role as a K-12 specialist for CDW-G, Eric Patnoudes has worked with numerous school districts. One roadblock that he sees time and again is a lack of communication between their curriculum and IT departments.

"In too many school districts, the way they are organized is very siloed," said Patnoudes, who saw the same problem when he was a teacher and an instructional technologist. "When the curriculum and IT teams aren't working together, it causes a lot of friction—and this can slow down the adoption of technology."

But in school districts that are transforming teaching and learning with the help of technology, there is no separation between curriculum and IT. These departments work together to evaluate classroom needs and purchase new technologies, so there is a common vision that puts students' interests first.

"We need those two departments to be working cohesively and strategically to improve student learning," Patnoudes said.

The program's goal is to recognize examples of cross-departmental communication, holding these up as models for other districts to follow. CDW-G and its partners will give away nearly \$100,000 in ed-tech products and services to the winning submissions.

To shine a spotlight on how this kind of collaboration can lead to greater ed-tech success, CDW-G has teamed up with eSchool News to launch a new awards program called Collaboration Nation.

The program's goal is to recognize examples of cross-departmental communication, holding these up as models for other districts to follow. CDW-G and its partners will give away nearly \$100,000 in ed-tech products and services to the winning submissions.

From now until June 30, K-12 schools and districts are encouraged to visit www.eschoolnews.com/collaboration and submit a short video explaining how teamwork has played a role in their ed-tech success.

Each month, the school or district whose video has been shared the most on Facebook will win \$15,000 in products and services from CDW-G partners such as HP, Lenovo, or



Meraki. At the end of the submission period, the school or district whose entry is considered most exemplary will receive \$50,000 in ed-tech products and services.

Patnoudes is one of four distinguished judges for the awards program. The others are Geoff Fletcher, an education industry expert who has served as deputy executive director for the State Educational Technology Directors Association, among other roles; Luann Hughes, director of technology for the Temple Independent School District; and Therese Mageau, editorial director for eSchool News.

Entries will be judged based on the degree of collaboration involved, the success of the ed-tech initiative, and its impact on educational outcomes, among other criteria.

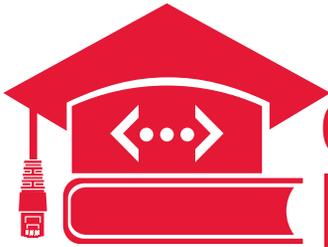
"Technology is no longer a luxury, but a critical learning tool," said Fletcher in a statement. "More than ever, the long-term success of technology-driven projects requires that we bring together all departments—IT, curriculum, instruction, and administration—and Collaboration Nation will recognize the schools and districts that have put in the hard work to make this happen."

Patnoudes said curriculum leaders often will get together with educators over the summer to design curriculum units for the upcoming school year—but these efforts rarely include instructional technologists.

Members of the technology team "should be sitting in those meetings while teachers are writing curriculum and talking about the resources that can support it, so teachers understand that technology is not an add-on but a new way of operating," he concluded.

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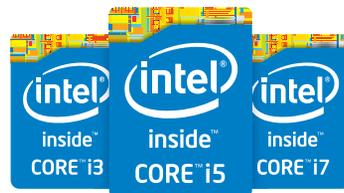
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Testing

continued from page 1

based district of 1,600 students and five schools had worked hard to prep itself for the computer-based K–12 assessments in English language arts and math. “We spent a lot of time and money on preparation,” says Superintendent Michael Clough.

But it all fell apart pretty quickly.

Within just a few hours of the first test being administered, it became clear that the district wasn’t as ready as it thought it was. “The first day of testing can be described as nothing short of a disaster,” says Clough, adding that the district ran into some repeated complications with firewalls, pop-up windows, and pop-up blockers—all of which may have contributed to students’ inability to even log into the testing system (let alone actually use it within the designated time frame). “Once students were able to log in, the problems waned—but getting into the system was a challenge in and of itself,” Clough recalls.

In some cases, high school students took up to three hours to log in, with just 10 percent of pupils actually able to get logged in within a few minutes or less. “By the two-hour mark on the first day, about half of our students were logged in and doing their tests.”

The issues that Sheridan SD was grappling with were so big that Pearson, the official testing vendor, sent out a tech support professional to help—a move that Clough is thankful for. “I definitely give them credit for that,” he says, “along with my own tech team, which basically had to touch every computer in the district twice the following morning, before students were ready to test.” He says frustrations were especially high because the district’s IT team did a run-through of the system on the Friday before testing with zero problems. “By Monday morning, the kids couldn’t log in.”

With more PARCC testing in Sheridan SD’s future, Clough says the district will be assessing its computer firewalls and determining (with the help of its security system provider) exactly what needs to be done to mitigate the problems that surfaced. “We also need a

backup plan for when students aren’t able to log on quickly,” says Clough, “and possibly a bigger investment in computers in order to accommodate more students and the delicate PARCC testing schedule.”

Do your homework

PARCC testing was a mixed bag at North Hunterdon High School in Annandale, N.J., where about 1,750 students were tested over a two-week period that was extended due to weather delays and closures. Principal Richard Bergacs says the first day of testing was “a little hectic” as students and teachers adapted to the new procedures and processes. A few issues with the school’s Wi-Fi and bandwidth also came into play early on, he says, but were cleared up fairly quickly. “Once we fixed the wireless issues, the teachers and students felt more comfortable,” says Bergacs.

To ensure the smoothest possible PARCC testing experience, Bergacs says the school strategically positioned six IT support personnel in specific zones on campus. When an issue or question arose, teachers were able to get them solved quickly. Bergacs says that support structure was particularly useful on day one of testing. By week two, he says, “the IT support pros were just sitting out in the hallways, not doing much.”

Hindsight being 20/20, Bergacs says the next wave of PARCC testing will probably find the school using a different approach to the testing windows. Unlike New Jersey’s High School Proficiency Assessment (HSPA), which requires testing take place on specific days, PARCC allows for multiple test sessions throughout the day. “We could do an a.m. session and a p.m. session and rotate students through,” says Bergacs, “so that it doesn’t impact as much class time.”

To schools and districts that struggled with their own PARCC challenges in March, Bergacs says it’s important to try everything out and test as much as you can before the actual examination period. “Be as prepared as possible for the technical issues that arise,” he says,

“and don’t wait until day one to find out what happens.”

Heading off the challenges

With more than 40,000 students spread throughout 55 buildings, Aurora Public Schools in Aurora, Colo., was able to administer PARCC tests to all of its students within the allotted test window and with the devices that it owns. “For us, that is one indicator of success,” says Lisa Escarcega, chief accountability and research officer.

She says the district did have to deal with some mis-administrations (i.e., tests that were not given in a standardized format according to the stated methods in the procedure manual and are therefore invalid), but notes that those issues were not related to technology. “They had more to do with the roll-out of the assessment package itself,” says Escarcega. “The accommodations manual that we used for training came in very late and wasn’t clear in a few areas. Of course, this is not atypical for a first-time administration.”

Working with Chief Information Officer Steve Clagg, Escarcega and her team dedicated much time and effort to the district’s assessment administration process. “Our IT staff came off other projects to have a presence here at the schools for the first couple of days,” she says. “That really limited the number of technology glitches that we might have encountered.” By the second week of testing, Escarcega says the district was experiencing very few—if any—issues with the testing process.

Going forward, Escarcega says she’d like to see a joint effort evolve on the part of the schools and districts that are involved with PARCC. By sharing best practices around top strategies for high school versus middle school, an optimal number of devices for a certain student population, and other key points, she feels districts could be more prepared for the next go-round. “Talking together about the best practices would be extremely useful.” 

Bridget McCrea is a contributing writer for eSchool News.

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New Partnership Leads to Greater Success for ELL Students

Hartford Public Schools has teamed up with Middlebury Interactive Languages to develop a new curriculum for English language learners

Connecticut's Hartford Public Schools has the largest percentage of English language learners in the state, with close to 20 percent of its students learning English as a second language.

These 3,800 students come from very diverse backgrounds and speak more than 80 different languages, and they are often a very transient student population—which creates a significant challenge for the district, said Monica Quinones, director of ELL services.

"We wanted a solution that could help meet the needs of our most challenging ELL students with a curriculum that was delivered on grade level, and not watered down," Quinones said. "We also wanted to take a blended-learning approach that would offer content in different modalities, while giving students the flexibility to work at their own pace."

To develop such a solution, district leaders turned to Middlebury Interactive Languages, a company with a proven record of success in delivering a blend of online and face-to-face instruction in world languages.

In collaboration with Hartford teachers and ELL coordinators, Middlebury Interactive developed a series of supplemental online modules for ELL students in grades 4-8, and Hartford teachers are piloting the new content in eight middle schools this year. The pilot program also includes significant professional development for participating ELL teachers.

The curriculum aligns with content areas the students already are studying, as well as the Common Core standards. The content addresses one of five themes in grades 4-5 and a different set of themes in grades 6-8, such as habitats and environments, inventions, natural disasters, and mythology. Each unit includes project-based activities to build students' vocabulary and skills in four key areas: reading, writing, speaking, and listening.

"We wanted to ensure that students were learning by doing," said Aline Germain-Rutherford, Ph.D., chief academic officer for Middlebury Interactive and a tenured linguistics professor at Middlebury College. "And we've tried to scaffold the activities so they can adapt to students at different levels."

The modules focus on helping students develop the academic English they'll need to succeed in school. Research suggests that ELL students have the most success when they see their cultural identity affirmed and can relate their own experiences to the curriculum—and this idea is reflected in the content as well.



As students progress through the units of study, they are accompanied by a virtual companion who encourages them, suggests learning strategies, and offers support. Students can choose their virtual companion from a range of ethnically diverse characters.

In addition, Middlebury Interactive has recorded ELL students from Hartford schools as they introduce themselves and tell their own stories. "We use these videos to develop students' listening comprehension skills," Germain-Rutherford said, "but also as a way to show students their peers within the modules, people like them."

Middlebury Interactive is now making this ELL curriculum available to other schools nationwide.

Though the curriculum has been in place for less than a year, Hartford teachers already are seeing encouraging results.

"The feedback we've gotten from teachers is that the students are more engaged, and the online component allows them to learn at their own pace," said Mary-Beth Russo, an ELL coach for the district.

Quinones said the district has seen growth in all four skills areas, but especially writing.

"We often talk about high rates of absenteeism among ELL students," she said, "but what we've noticed in the eight pilot schools is excellent attendance—near 100 percent. That's telling. It suggests a high level of engagement."

She added, "The discourse that happens in the classroom is noticeably better. The students are verbalizing more than they did before. This is speeding up the pace of their language acquisition."

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- Utilize a project-based approach that favors multicultural perspectives.
- Focus on academic English, including reading, writing, listening and speaking skills, as well as vocabulary building.
- Align with Common Core and WIDA standards.



The problem with the SAMR model

Lately, I have noticed a lot of talk about the SAMR model of technology integration. For those unfamiliar, SAMR is a framework for evaluating the level at which a given technology has had an impact on teaching and learning. The popular acronym stands



Trevor Shaw

for substitution, augmentation, modification, redefinition. It was designed by Dr. Ruben Puentedura to define the level of impact that a particular technology has on a learning activity. Each word in the acronym represents a higher level of impact.

For example, in the substitution level, a technology replaces a more traditional tool with no functional improvement. A class that uses Google Docs to write their essays instead of a pen and paper is at the substitution level. In the augmentation level, the change brings about some amount of functional improvement such as a teacher embedding comments in the student's Google Doc rather than passing pages back and forth. The modification level indicates a substantial redesign of the task. Perhaps now the teacher incorporates peer sharing and feedback from classmates. Finally, the redefinition level describes a task that would previously have been impossible to do without the aid of the technology, such as a project where student writing is published to the web—and open for outside feedback—through Google Docs.

There is definite value to looking at your use of technology through this lens. Essentially it is forcing a teacher to ask herself, "Is the technology adding value to what I am doing?"

As I have watched teachers at my own school attempt to use the SAMR model to both evaluate current uses of technology and to plan future ones, I have begun to identify a few big concerns.

It's easy to get hung up on the definitions. It isn't hard to tell the difference between a use that is a simple substitution and one that is a redefinition. It is not always so easy to tell, however, whether a particular use of a collaborative tool is modification or

merely augmentation.

I firmly believe that it doesn't much matter. For our purposes, I want our teachers to acknowledge that there are differences in the levels of impact and added value. It's important to make sure that we are adding value, but getting hung up on exactly which category a use falls into is probably a waste of time. I like the fact that the SAMR model draws a dividing line between augmentation and modification. It defines uses that fall into the bottom two categories as enhancement and ones that fall into the top categories redefinition. It's probably valuable for teachers to make sure that they have some activities on both sides of that line, but that's about as granular as I want them to get.

It implies that redefinition is the ultimate goal. Advocates of the SAMR model will be quick to point out that redefinition is not inherently better than substitution or augmentation, but this point can't be made often enough. Any model that places things in a hierarchy or an order is going to imply that the goal is to get to the top. I recently heard one metaphor that I really like that uses a swimming pool. There are lots of cool things to do in the deep end of the pool, and you want to make sure that everyone is comfortable enough to swim in the deep end. But there are plenty of fun (and important) things that can only be done in the shallow end. Teachers need to be comfortable swimming in both ends of the pool, but they should not be pressured into shoe-horning a "deep-end" activity into their curriculum because they think that is what is

expected of them.

Most importantly, it says nothing about learning goals. My biggest concern about the use of SAMR to guide technology integration is that it focuses on how a learning activity has changed while saying nothing about how to determine the value of that change. In the hands of a talented teacher who has a clear sense of how her use of technology advances her goals for learning, this may not be a problem. When evaluating a school-wide program, however, I think it is critically important to identify specific learning outcomes to give some context and rationale for any change in learning activities. In our middle school iPad initiative, we identified three such curricular goals, and we said that uses of the iPad should be designed to help advance these three goals:

- Students should own their learning
- Students should consume information critically and intentionally
- Student should communicate clearly and powerfully.

While the SAMR model helps us to evaluate the magnitude of the changes brought about by our iPads, it is these three curricular goals that help guide us and ensure that such a change aligns with our stated goals about teaching and learning.

We use the SAMR model effectively to make sure that our teachers are all making use of both sides of the swimming pool where appropriate. It is important, however, to make sure we are also evaluating the ways that technology is helping us to advance our stated curricular objectives. To do this, we need to push beyond the SAMR model. 

Trevor Shaw is currently the director of technology at the Dwight-Englewood School and can be reached at @shawt, +TrevorShaw and shawt@d-e.org.



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What are IT leaders worried about?

Assessment readiness and money

For the past three years, CoSN—the Consortium for School Networking—has conducted the *K-12 IT Leadership Survey* seeking to identify major trends and challenges and provide a picture of these leaders.

What are the key technology trends in education according to leadership in our school systems? What do the data tell us?

Assessment readiness is again the No. 1 priority for IT leaders. The growing imperative about being assessment-ready isn't likely a surprise for those living in states adopting the Common Core. However, regardless of where you live, all states are increasingly moving their high-stakes assessments online. And, they are doing it quickly.

Yet less than 30 percent report they are fully prepared for online assessments. Sixty-two percent of respondents say they are either “fully prepared” or “almost ready.” But that still leaves nearly 40 percent of districts unprepared to implement online assessments.

Another growing concern is privacy. Last year, for the first time, we added privacy to the list of potential top concerns. It ranked dead last by our IT Leaders. Perhaps that didn't fully explain the situation since privacy might be a concern, but not yet a “top tier” concern.

This year we asked the question in a different way; “Is privacy and security of student data more important, less important, or the same as last year?” An overwhelming 57 percent agreed it was a more important issue. That is a dramatic increase, yet not surprising given high-publicity security breaches and the increasing concerns expressed by parents and policymakers.

One concern that hasn't changed is the lack of money. Seventy percent



Keith Krueger

report a flat or declining budget for technology. Fifty-four percent of IT leaders indicate they don't have enough money to “meet overall expectations of the school board/district leaders.” Budget hardships were also highlighted by the response to the question about the top three

challenges IT Leaders face. For each of three years our survey has been conducted, budget constraints and lack of resources ranked as either the No. 1 or the No. 2 challenge.

When we ask IT leaders to identify their greatest challenges, the answers are not really about technology. That is not to say there are not technical or technological problems, but people, cul-

ture, and funding trump them. Beyond lack of money, the other top concerns were providing relevant professional development and breaking down silos within our school systems. These cultural and human aspects of digital learning are the hardest to solve.

their compensation lags behind IT leaders in the private sector. Private-sector CTOs in the bottom 10 percent of earnings range earn more than the average K-12 IT leader.

Even more disturbing, female K-12 IT leaders earn even less than their male counterparts. Women make up 65 percent of the lowest salary range for K-12 IT leaders.

The survey also shows that K-12 IT leadership lacks diversity—88 percent are white. While that percentage somewhat aligns with the general population of whites in the United States (78 percent), it does not reflect the makeup of the K-12 student body, which is projected this year to have a majority non-white population.

What do these trends mean for superintendents and school boards?

Private sector CTOs in the bottom 10 percent of earnings range earn more than the average K-12 IT leader

Women make up 65 percent of the lowest salary range for K-12 IT leaders

ture, and funding trump them. Beyond lack of money, the other top concerns were providing relevant professional development and breaking down silos within our school systems. These cultural and human aspects of digital learning are the hardest to solve.

The 2015 Survey also highlights interesting trends and demographics around our IT Leaders—or what CoSN generically calls our chief technology officers (CTOs). While these leaders have extensive education technology experience and educational credentials,

- The move away from paper tests is undeniable.
- Privacy concerns are here to stay.
- In an era when budgets are flat, you need to reallocate your budget for sustainability.
- Focus on building the human infrastructure around technology.
- Changing education culture is the hardest part about technology. 

Keith Krueger is CEO of the Consortium for School Networking.

How to build fearless PLNs

Try these best practices for finding and collaborating with fellow educators

By **Randy Hansen**
and **Nicole Zumpano**

Research indicates that nearly 50 percent of educators will leave the field within the first five years of entering a classroom. This is an astounding number that costs the U.S. more than \$2 billion annually. Why the high burnout rate? Many cite isolation and lack of support as reasons for exiting the field. Sometimes new teachers are nervous to admit they may be struggling. By helping educators build strong connections



Collaboration is important for PLNs.

to others, both within their buildings and around the world, we can begin to create more stability in the profession and refresh our passion for education.

Teachers are natural collaborators. From the school hallways to what could be called today's water cooler—social media—teachers love to share and discuss what's working, what isn't, and the finer points of why or why not.

Collaboration is very much a process. It's about ideas and problem-solving and some trial and error, with reflection playing a critical role. To support this process, we will unravel the process of building a Professional

Learning Network of fellow educators, and how it can remove isolation and improve your professional practice.

1. Identify a mentor

Every teacher was once a new teacher and experienced the emotions of learning about their students, school, pedagogy, and all that paperwork. Remember that any trepidation you may have about your practice have most likely come from questions posed by another educator in your building. Identifying a mentor or key collaborator within your immediate environment should be your first step. Find someone you can work with, bounce ideas off, and say, "No, that won't work." This doesn't have to be a formal process, but instead should develop as more of an ongoing conversation, an opportunity to reach out and just ask questions.

2. Build a PLN outside of your building

As important as it is to have a go-to in the building it is equally important to have other points of view and opinions. Extend your PLN from your local mentor to the entire globe. PLNs allow you to use technology to pull ideas and resources to you as well as push out your thoughts and ideas. There are a multitude of resources available to begin building a professional learning network. Here are some of our favorites:

- **Twitter.** If you have not participated in Twitter chats these are fantastic ways to connect at a deep level. There are hundreds of Twitter chats taking place at scheduled times. If you are new to chats, you can start by passively reading them without getting involved. Follow people in chats specific to your interests and look to see who they follow for additional ideas.
- **Teachability** is a social network developed by Pearson. Find "Communities" to follow where you can ask questions,

share breakthroughs, and respond to others. There is a community specifically for new teachers.

- **Edmodo.** While many educators use Edmodo as a learning management system for their students, Edmodo offers much more. There are communities for educators to share and ask questions, and communities for topics including Common Core, professional development, and careers and tech.
- **Google+** not only has communities available for you to join, but gives you the ability to create your own.
- **Pinterest** is a place to connect with others, learn from others, and share your own content in a visually appealing format.

3. Grow in stages

As we stated earlier, developing a PLN is a process. There are several stages that you will experience as you develop your very own personalized learning network. Jeff Urtecht wrote a great post on his blog, "The Thinking Stick," on his interpretation of the stages: immersion, evaluation, know-it-all, perspective, and balance. Finally, share your ideas. Ideas spread around the globe like wildfire, and it is a confidence boost when someone else benefits from your ideas (or in turn hears how you benefited from theirs).

4. Approach PLNs with curiosity

Look at your PLN as a source of inspiration to connect ideas. Life is not linear; we move side to side, one step back for two steps forward. Some of the biggest leaps forward can come from a setback (consider the pacemaker and Post Its). As you stay informed and build your PLN, remember that inspiration and ideas do not emanate from education-related networks alone. Inspiration comes from many different places. For example, we like looking at Kickstarter projects or Kiva for real-

world activities to incorporate into our classrooms. It's about being inquisitive.

5. Share

Take time to share and ask others to work with you and to innovate, reflect, and share together. This seems to be the most difficult step for some. Reach out and ask someone if they'd like to work on a project. Equally important is giving back to your PLN and your community. Consider presenting at local, state, and national conferences. ISTE's annual conference is a wonderful opportunity, but so are state affiliate conferences. ISTE affiliates are in all 50 states, and around the world, and provide wonderful opportunities to connect and collaborate.

6. Collaborating means failing sometimes

Our penultimate thought is about failure. Too many times people are afraid to fail. Collaborating on new ideas, projects, or strategies will involve some amount of failure. Reflecting on failures and successes only improves your practice. Failure is not the end of a project, but a learning opportunity. Your PLN is not only a place for inspiration and making connections, but sharing what you've learned. You might be surprised how much support and feedback you get!

7. Stick with it

Collaboration can be complex. The process can be time consuming, and it takes effort to establish and build connections, but the rewards of new relationships and professional growth are well worth the effort. Collaboration is a 21st-century skill we're developing in our students. It's important for them and it's important for us. We need to be their role model and mentor and to continue to model a positive digital presence for them. Coincidentally, the collaboration

for this article stemmed out of a casual long-distance conversation between two friends and colleagues. See how easily that can happen? 

Randy Hansen is program chair, instructional technology at University of Maryland University College and President, Teacher Education Network, International Society for Technology in Education.

Nicole Zumpano is a technology coach in Chicago Public Schools and an adjunct professor at Dominican University. Connect with the authors on Twitter @RandHansen and @nmzumpano.

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CTO

continued from page 1

School District in San Antonio, says one overarching theme is the struggle to balance the increasing number of tech-based learning tools and applications with the need for solid personal and data security.

Young says this issue hits particularly hard for districts that are using more cloud-based services, versus hard drive-based software systems. “The decision over whether to give teachers and administrators access to all of these services is a big one,” says Young. “There are now a lot of [resources] that are accessible online and that may or may not be endorsed by the school or district.”

2. Data sharing. According to Young, this is an issue that’s been brought to light on a global scale by the recent Home Depot, Target, and bank-related security breaches. Again, he points to the cloud as a driving factor behind these “talks,” noting that an administrator could unintentionally share private student data with “every-one in the district.”

3. Social media safety. John K. Orbaugh, executive director of technology for Tyler Independent School District in Tyler, Texas, also participated on the panel and says that online security and safety issues are always paramount in his team’s mind. With so much activity taking place on social net-

working sites like Facebook, Twitter, and Instagram, for example, CTOs struggle to balance required protections with the ability to use such platforms. “It’s a constant tug of war,” says Orbaugh, “and we only have so many staff members and hours in the day to support all of this activity. We can’t be all things to all people.”

4. Tight budgets. Orbaugh says technology funding is another sore spot right now for CTOs—particularly those who are based in Texas and no longer receiving instructional computing funding. Recently rolled up under the “instructional materials” umbrella, this funding source once provided about \$30 per student for technology spending. “It wasn’t a lot of money,” Orbaugh admits, “but at least I knew that I could count on it.”

5. Wi-Fi worries. Sheryl Abshire, Ph.D., CTO at Calcasieu Parish Public Schools in Lake Charles, La., sees the bring-your-own-device (BYOD) trend as being particularly onerous for today’s CTOs. Of particular concern is having the right amount of bandwidth to support students and teachers who tote multiple devices on campus and that require Wi-Fi to support those devices. To minimize the problem, Abshire says her district conducted several internal surveys about its existing wireless setup, and then—like Orbaugh—turned to E-rate’s Category 2 funding to help fund the addition of a robust, reliable network.

6. Too much device diversity. Of course, with more BYOD taking place on campus, the need for technical support increases exponentially. “A teacher whose classroom is populated with 30 or 40 different devices doesn’t have the time to figure them all out—particularly when a student has a problem,” says Abshire, who advocates the use of standardization (for devices, operating systems, etc.) as a way to overcome this hurdle. “Standardization has worked well for us. When a help desk ticket comes in, we know the device in question and can address the problem as quickly and efficiently as possible.” 

Bridget McCrea is a contributing writer for eSchool News.

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Putting technology to work in rural schools

For rural schools, technology is a solution but also another challenge

By **Brian C. Hassel**
and **Stephanie Dean**

For rural schools, technology is a solution but also another challenge

Technology makes it possible for each of us to do more, learn more, and be more connected. That's true for education in general, but its potential seems particularly compelling for rural schools, which struggle to offer an array of learning opportunities, to transport students to a central facility, and to get the best combination of teachers from small candidate pools.

Technology in education sounds terrific: It can bring the world to a classroom. It can give students access to courses and resources they might not otherwise get. It can inject engaging fun into the classroom, as students learn through games and create in a digital medium. Technology seems like a shiny tool that will build a bridge across the achievement gap.

But technology's power, like any tool, depends on how it is used. If a builder buys a new skill saw and wants to get the full value from his investment, he will place it in the hands of his best carpenter, and will charge that leader with training the other carpenters to use it effectively.

Likewise, efforts to use digital tools in education gain new potential when paired with efforts to give more students access to the best teachers. Schools in several states are doing just that, by developing new staffing models that break out of the traditional one-teacher-per-classroom model. They extend the reach of their top teachers using technology and team leadership. These teacher-leaders help their peers orchestrate in-person and online activities to maximize student learning. They use flexible student groupings and scheduling to meet each student's needs while coaching teams of teachers toward excellent instruction.

Most rural schools, including dis-

tricts participating in the Idaho Leads initiative, the Idaho P-TECH network, Khan Academy in Idaho, and other efforts, are already forging ahead with integrating technology into their work. But to tap the full potential of technology, students, communities, educators, and policymakers will also need to re-envision the traditional paradigm: particularly the notion of education deliv-

Some rural schools are developing new staffing models that use technology to break the traditional one-teacher-per-classroom model.

ered within classrooms of 20 to 30 students led by a single teacher.

In a paper funded by the J.A. and Kathryn Albertson Foundation and developed with the Rural Opportunities Consortium of Idaho (ROCI), we offer a set of recommendations to overcome challenges and capitalize on the potential of technology to serve rural students, particularly those in Idaho, including:

- **Expand broadband access to schools lacking it**, and give students broadband connectivity outside of the school building. Many visions of digital learning in rural environments involve students accessing online learning resources outside of the school setting, whether at home, in learning hubs based in community centers or churches, or on Wi-Fi-enabled school buses. Idaho should make broadband access a priority, moving it past the woes of the Idaho Education Network.
- **Create an elite corps of proven teachers who can digitally teach students across the state**, with a

focus on teachers of classes needed for college and courses that allow high school students to earn college credit. Students do not need access to just any teachers, but to excellent teachers who can help them surge ahead in their learning. Public or philanthropic funds could catalyze the creation of an elite corps of proven excellent teachers who would then be made available to students across a state or a multistate area. This would require certification and licensure issues to be addressed for out-of-state teachers who have shown themselves worthy of entering the elite pool of online instructors.

- **Provide districts and schools with the flexibility to develop new models of staffing and technology use** and to spend current funds to achieve the needed combination of personnel, facilities, and technology. One of the biggest constraints districts face in states such as Idaho is funding tied to specific position types or other input categories. With more control over funding, schools and districts could reallocate their dollars to pay excellent teachers more and buy the technology those teachers need to extend their reach to more students. Many districts could fund a digital conversion by reallocating funds that are currently being used for non-essential staff positions, textbooks, and other purposes.

To read the whole paper, visit www.rociidaho.org. 

Bryan C. Hassel is co-director of Public Impact, a national research and consulting firm that aims to dramatically improve learning outcomes for all children in the U.S. He is a member of the Rural Opportunities Consortium of Idaho. Stephanie Dean is vice president of teaching and learning policy at Public Impact. A version of this piece first appeared in the Idaho Times-News.

Learning Analytics, Simplified

Jupiter iO gives educators 'a blueprint for how to improve' with one easy-to-use, integrated system

Software that helps educators analyze benchmark test data, identify key skills gaps, and spot larger trends can be a powerful tool for improving student achievement. But as Steven Rubenstein knows from firsthand experience, if this software is not easy to use, it won't be effective in transforming instructional practices.

Rubenstein is a high school English teacher and technology TOSA (Teacher on Special Assignment) for the Beverly Hills Unified School District in California. His district was using a data analytics tool that wasn't intuitive, and as a result, teachers were not using the system.

Importing data into the district's old system was a "multi-step process," Rubenstein said. Because the system did not integrate with the district's gradebook, teachers had to export the results from the benchmark assessments they gave students. Reports were hard to produce as well, making the system very difficult to use.

A few years ago, the district approached its gradebook manufacturer, Jupiter Ed, about developing a data analytics tool "that would better meet our needs," he said. The resulting

Because Jupiter iO is so easy to use and is integrated within each teacher's gradebook, Beverly Hills has seen more teachers using data analytics to improve their practice.

– Steven Rubenstein, high school English teacher and technology TOSA (Teacher on Special Assignment), Beverly Hills Unified School District, California

software, Jupiter iO, is a cloud-based, all-in-one solution that combines a gradebook with a student information system, learning management system, and data analytics tool for ease of use within a single, integrated program.

Now, Beverly Hills teachers can use the same software to create a benchmark assessment, score it, and analyze the results. Because the analytics component is integrated within each teacher's gradebook, "teachers can connect an assessment they have built with an analytics template by simply checking a box," Rubenstein said. The scores then are available for school-wide analysis.

What's more, the reporting capability of Jupiter iO is quite impressive. Reports are easy to create, Rubenstein said, and they can be configured to compare students by school, gen-



der, race/ethnicity, and other custom groups. Educators can track the progress of students over time, compare the results of experimental and control groups, and even check for the statistical significance of any variation in results.

In building online benchmark exams, teachers can tag questions to specific standards. "That enables us to see how kids perform on certain standards," Rubenstein explained. As students take these assessments online, their scores are calculated automatically, giving teachers instant access to the results.

Because Jupiter iO is so easy to use and is integrated within each teacher's gradebook, Beverly Hills has seen more teachers using data analytics to improve their practice, Rubenstein said.

In the English department at the high school, for example, "we discovered that students had a lot of problems with verb conjugations," he said. "That surprised us, because it seemed like something we would not have to teach directly." This discovery led to a discussion about how best to teach this skill—not only in terms of pedagogy, but also in terms of sequencing: When should teachers be introducing this concept?

Middle school math teachers, meanwhile, discovered that students were struggling with the transition to eighth-grade algebra, so they created a bridge course that students can take over the summer to help with this transition.

Conversations like these are now routine within the district, thanks to a data analytics tool that is both powerful and easy to use.

As Rubenstein concluded: "Jupiter iO gives us a blueprint for how to improve and how we can solve key issues."

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Why cellphones belong in our classrooms

As NYC lifts its infamous cellphone ban, one local principal sees nothing but possibilities

By Nancy Amling

As the principal of Hudson High School of Learning Technologies (HSLT) in Manhattan, I know firsthand how cellphones can both help students stay in touch in today's world and how they can be a valuable teaching and learning tool in the school setting. The New York City Department of Education's recent decision to lift the cellphone ban in schools—a decision I support—acknowledges and affirms this notion.

At Hudson HSLT, we strive to create an academically rigorous and personalized environment that prepares all of our students to be college- and career-ready. We want our students to be critical thinkers, ones who practice the art of questioning and are able to deconstruct, reconstruct, and communicate information in today's society.

We believe that the use of technology, including cellphones, when implemented purposefully to support classroom instruction, can help foster these skills.

Hudson HSLT is a digitally focused and device-agnostic one-to-one computing school; we look at technology as a support for teaching and learning. Day-to-day, our teachers might use mobile devices in class for their daily drop-everything-and-read (DEAR) activity or to let students work on their class blogging assignments.

But we don't ignore the larger issues surrounding technology's role in the classroom, and students aren't expected to navigate through using technology by themselves.

We work diligently on teaching students how to be digitally responsible through learning how to recognize authentic online sources and cite them accordingly. Also, since much of our student work is outward facing, we teach students appropriate ways to present themselves through online media. We show them organizational skills,



Proper cell phone use can foster important skills

such as managing files and their time online effectively. All that we do with technology at our school is designed to move students from digital natives to digital learners.

The decision from the New York City Department of Education to end its ban on cellphones at school will allow us to add these versatile devices to the mix as we continue to incorporate technology and mobile devices into our teaching and learning processes in meaningful ways. One thing we—and other schools throughout the city—need to be mindful of is the digital divide, which still exists between those who have smartphones and those who do not—and between those who have internet access at home and those who do not.

Just like with laptops and iPads, some students simply might not have cellphones. It's up to us to accommodate for that, and to make sure all students have comparable tools for learning. For example, if we ask students to take notes on their phones or take photos for a project, we need to make sure devices are available for students who do not have them so they can participate in those activities.

The best way to keep any technology

from being a distraction is through engaging instruction and the continued teaching of digital responsibility. While we may have students who check a text message in the hallway or on their way to a class, students will use their phones as a tool to further their learning while in the classroom. Our students have been responsible with the use of technology so far, and we believe that will continue now with the freedom to bring and use cellphones in school.

Instead of worrying about misuses of the technology, we will continue to keep our focus on improving our own teaching so students are engaged and challenged. My teachers use the SAMR model—which stands for substitution, augmentation, modification, and redefinition—to see how educational technology might impact teaching and learning. We are always looking at how the technology can complement and support innovation in what is being taught, so that the technology is maximized to meet teacher and student needs.

We know that technology will continue to greatly impact education. Instead of honing in on the potential cons of cellphones in the classrooms, we believe that it is important to think of the possibilities they can afford if they are used intentionally to enhance teaching and learning for all our students. **eSN**

Nancy Amling is the principal of Hudson High School of Learning Technologies, an Institute for Student Achievement partner school located in the Chelsea neighborhood of Manhattan in New York City.

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Will Apple solve the iPad deployment headache?

By Sam Glikzman

The ultimate goal of technology deployment is for device use to become “invisible,” where students create and communicate with their devices as easily as they might pick up a pen.

That goal unfortunately remains a distant vision for most schools regardless of the technology students are using. Device deployment has been a particular challenge for schools with iPads. In fact it’s been such a headache that iPad sales into schools have started to lose momentum in the last year. Apple has taken steps recently to make device management somewhat simpler and rumors are circulating that significant changes might be on the way in the next year.

The iPad is built upon the same building blocks that made the iPhone so successful. It’s a personal device that requires an Apple ID for access to iTunes, apps, and eBooks. I’m not sure that anyone anticipated the enormous success iPads would have in schools. Educators viewed them as devices that were mobile, could deliver eBooks, manage online course content, and had powerful built-in media tools for creative inspiration. However, from a management perspective, they were designed for individual use and didn’t come with a simple, effective strategy for institutional deployment.

Apple has been slow to react to the management needs of schools. The recommended model for iPad use in schools is what Apple calls the “institution-owned one-to-one” deployment. Each student and staff member is assigned a device that’s purchased, configured, and managed by their institution. A mobile device management (MDM) solution simplifies the setup and management of devices. Apple’s Device Enrollment Program registers devices with the institution’s MDM so that devices can then be configured and rolled out efficiently. In our ideal scenario, each student has an Apple ID. Each iPad is handed to a student or staff member and the MDM configures the



Apple may soon make it easier for schools to manage their iPads.

iPad wirelessly with accounts, settings, restrictions, and content. Content is backed up to a personal iCloud account where it can be accessed offsite at any time. It’s a lengthy process but manageable when everything goes smoothly... except for the fact that ideal scenarios are very rarely ideal.

Here’s a rundown of four areas where many deployments fall short and where policies need to change.

Consolidate solutions across deployment models

Apple recommends one-to-one deployment as the model most likely to yield maximum learning benefits. It’s no surprise to hear that schools have limited budgets and many can’t afford an iPad for every student. As a result, most schools either share iPads or use a hybrid model where some grades have one-to-one while others share devices. In contrast to iPads, other devices such as laptops and Chromebooks are designed to accommodate multiple users. Once a user is logged in, the device is personalized with their preferences and content. However, when I pick up an iPad there’s an expectation that I’m the same person that last used it—which is clearly not always the case when devices are shared. Personalization,

access to private content, and data backup all become major headaches. Apple’s management policies need to accommodate the vast number of schools that share iPads between students.

Simplify Apple ID requirements

Users need to have an Apple ID in order to gain access to the App Store, iTunes, the iBooks Store, and iCloud. If devices are being shared, they are usually assigned multiple school-owned Apple ID accounts, making setup a very long and labor-intensive process. In one-to-one environments each student needs an Apple ID. It’s a problematic situation in elementary schools given that Apple’s interpretation of the Children’s Online Privacy Protection Act (COPPA) requires parental consent for any accounts that belong to students under the age of 13. Apple responded with the Apple ID for Students program. In short, schools upload a list of students and parent contact e-mail addresses. Apple then automatically sends out an e-mail request to each parent and issues the Apple ID when approval is received. However, what many schools have discovered is that e-mail isn’t as

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ubiquitous and reliable as we may have thought. Many parents don't have access to computers, don't check e-mail, or speak a different language.

The Apple ID requirement derives from the design of iOS devices for personal use. Given school realities of shared iPads and students under age 13, the need for an Apple ID becomes a significant obstacle. Instead of applying patches, Apple could allow administrators the option of distributing content directly to devices without an Apple ID. This would not only would it make it easier to distribute apps and eBooks, but it would also simplify the entire setup process. Stay tuned....

Provide enterprise storage and sharing

Apple's iCloud service is the recommended storage solution for users of

iOS devices. It backs up and synchronizes designated content automatically from Apple devices. iCloud works very effectively as a personal backup solution but it wasn't designed to meet the needs of enterprises. Accounts are linked to personal Apple IDs. There isn't any enterprise administrative control over individual iCloud accounts. Apple needs to draw a lesson from the success of Google Apps for Education and provide schools with an enterprise-wide version of iCloud with centralized administration and simple backup, transfer and sharing of content within domain accounts.

KISS

Yes, that clichéd acronym ("keep it simple, stupid") definitely applies to technology deployment. There are too many layers and too many alternative approaches to iPad deployment at the moment. There's one policy if you have a one-to-one program and a different deployment method if you share iPads.

There are different policies for configuration profiles, device enrollment, creation of Apple IDs, volume app purchasing, app distribution, applying updates, and more. It's terrific job security for IT managers that have conquered that mountain but a long climb for others that are desperately trying to learn the steps. Schools will embrace iPads more enthusiastically once the deployment process becomes shorter and simpler.

iPads have tremendous educational potential. If you believe the rumors that are circulating, Apple will be addressing some of the deployment problems in the coming year. Once device management becomes easier, schools can focus their efforts on realizing the promise of mobile devices for learning. **eSN**

Sam Gliksman is an educational technology consultant and speaker. He is the author of the iPad in Education for Dummies series of books.

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Educators get put to the test (but do they know which one?)

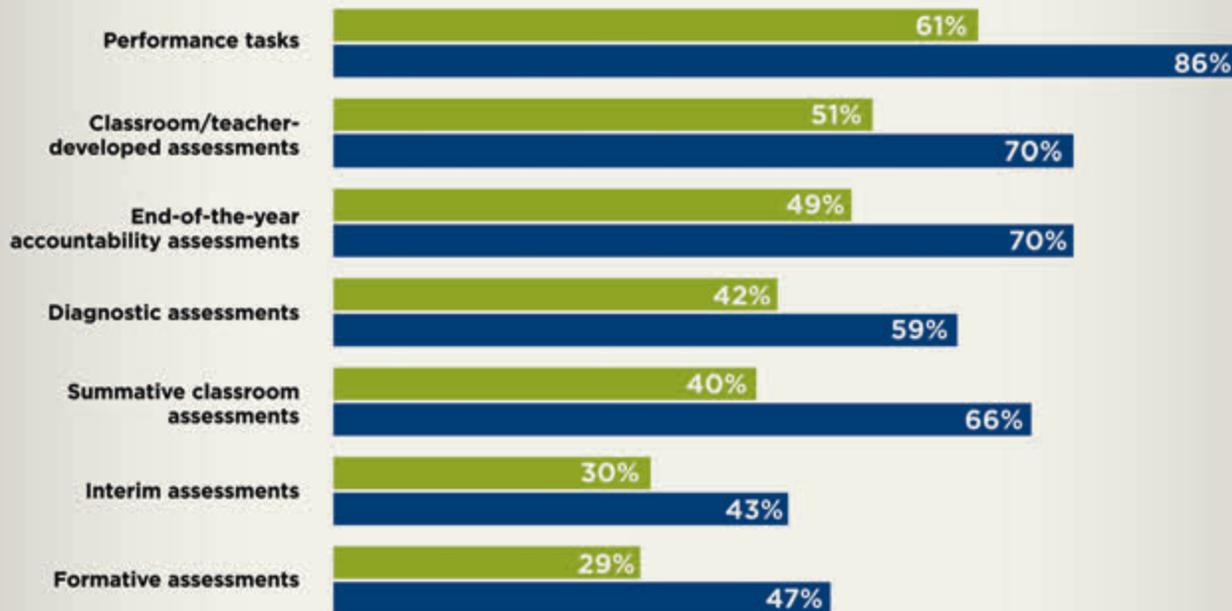
Student assessment has come under much scrutiny lately, in no small part because of the role that it plays in the Common Core. Many teachers, administrators, and parents object to the emphasis placed on high-stakes testing, and have called for a more diverse approach to determining students' academic progress. Yet when the Northwest Evaluation Association (NWEA), in conjunction with the research group Grunwald Associates, did a comprehensive survey of educators, in 2014, about the state of assessment, many respondents displayed a lack of understanding of alternative assessments. Asked to match the definition of the assessment type (provided by NWEA) to the correct term, fewer than a third of teachers, for example, correctly identified "formative" and "interim" assessments. Perhaps that's due in part to the fact that, according to the study, more than one in three teachers receive no assessment training. The public report can be found at www.grunwald.com.

Educators' Understanding of Assessment Types

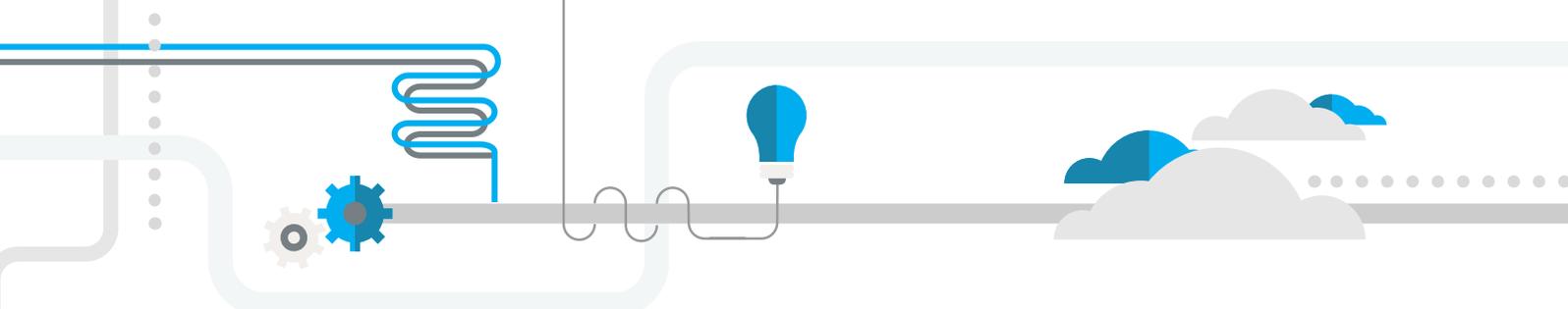
For the different types of assessment terms below, please match the assessment with the definition you feel best describes the assessment term.

Percentage of educators who matched assessment types with the correct definition and purpose

Teachers District Administrators



Source: Grunwald Associates



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