

DA

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January/February 2022

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After COVID-19 forced the Future of Education Technology Conference© to go to a virtual format in 2021, we are excited to be gathering in person again in Orlando this year.

This opportunity to learn and network with thousands of other educators and ed-tech enthusiasts, view the latest tools from top education technology companies, and explore the future of education is something not to be missed.

With inspiring and engaging keynotes (including the always-popular Tech Share LIVE!), five tracks that are tailored to focus your learning, hundreds of sessions, five content-focused theaters, and a jam-packed Expo Hall featuring the latest in education technology, there's something for everyone.

Returning this year is the Top Ed Tech Products of the Year awards, which recognize the most innovative tools and products that were created or updated in the last year. The 15 winners will demonstrate their products at three sessions in the STEM Theater. You'll find a list of the winners on page 16.

In this issue we also list our recommendations for the 10 can't-miss sessions that will inspire educators and leaders, from cybersecurity considerations, to the benefits of esports on STEM and SEL, to transforming classrooms with AI, AR and VR. Find this roundup on page 18.

And of course, the networking and idea exchanges that occur in person just can't be replicated online. FETC is a unique opportunity to learn not just from the "experts" but from your counterparts doing the work in schools and districts across the country.

For more information and to register, please visit fetc.org.

I hope to see you there!

Eric Weiss, executive editor

Reasons to visit DistrictAdministration.com

Schools across the U.S. are being forced to close as threats keep coming

Districts in Colorado, Michigan, New York, New Mexico and Utah are among dozens that have gone remote.

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School closings tracker: Where districts are shutting down due to COVID-19 outbreaks

Administrators are seeing much more in-school transmission this year.

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Active disruption: Why critical race theory benefits all students

K-12 educators can validate the lives and contributions of marginalized and disadvantaged communities.

bit.ly/race-theory



'Mass exodus': COVID, politics may spark wave of principals quitting

More than one-third of principals say they've been threatened over COVID safety precautions they've taken.

bit.ly/principals-quit



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Head of Risk and Response at Resilience

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Things to Know About Ed-tech Collaboration Tools

With online and hybrid learning set to outlast COVID, students (and teachers) will be looking for smoother user experiences as they work with new digital learning tools. This requires adding platforms from which learners and educators can access learning management systems as well as other collaboration tools such as Google Classroom, learning apps and videos.

Here a few things to keep in mind:

1. New options: A new breed of “ed-tech-as-a-service” tools can make it easier for teachers to manage student engagement in online and in-person classrooms, says Maggie Hallbach, vice president for public sector business development and strategic sales at Verizon. “Juggling technology and students and pedagogy is really hard,” Hallbach says. “We hear loud and clear from students, administrators and faculty that there needs to be a much more simplified way of bringing

technology components together.”

2. Pilot programs: Communications giant Verizon is piloting its BlueJeans collaboration platform with two universities to test its ed-tech capabilities in the more demanding higher ed environment. The goal, however, is for K-12 districts to adopt the tool to give teachers and students secure access to content and all approved ed-tech apps, Hallbach says.

3. Not an LMS: BlueJeans is not a learning management system, but it can integrate with an LMS and its features extend beyond more common video-conferencing platforms such as Zoom. Teachers, for example, can connect with students and manage remote classes while also presenting polls or videos, Hallbach says.

4. Professional development: Teachers can find professional development on collaboration tools through the Verizon Innovative Learning program.



5. What's next? Looking ahead, Verizon is developing the technology and pedagogy to integrate virtual reality into BlueJeans to create immersive classroom experiences.

“It’s all about simplification,” Hallbach says. “We know school districts want to allow these students to work remotely and in hybrid models where the technology is serving both the student and the teacher.”

—Matt Zalaznick

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The Cost of Connecting

Why 18 million homes aren't online and who's working on the problem.

Unaffordable internet service is keeping millions of kids and their families offline despite heavy investments that have brought broadband to many neighborhoods.

But school administrators can take some comfort in efforts that are now underway to close that gap and provide access to more of their learners. The non-profit EducationSuperhighway, which has connected tens of millions of students at their schools over the last several years, is now transitioning to help underserved communities access the web.

More than 28 million of the nation's 122.8 million households do not have high-speed broadband but it's not because the connections aren't available. More than 18 million of these households—home to nearly 47 million people—can't afford to connect to the service available in their areas, according to Education Super-

highway's just-released No Home Left Offline report. This "affordability gap" accounts for two-thirds of America's digital divide. The report identified two other barriers:

- The broadband affordability gap disproportionately impacts low-income, Black and Latinx Americans and individuals with less than a high school education.
- As few as 17% of Americans eligible for federal broadband affordability programs participate due to awareness, trust and enrollment barriers.

"Many unconnected households are concerned about sharing personal information as part of the sign-up process and are skeptical the Emergency Broadband Benefit will actually cover the cost of their home broadband connection," the report says.

The federal government has devoted \$20 billion to the nation's largest-ever

broadband affordability program while internet service providers are increasing the availability and speed of affordable broadband plans. EducationSuperhighway is embarking on the following strategies to connect more homes:

1. Develop a data-gathering system to identify unconnected households on an ongoing basis.
2. Deploy free Wi-Fi to low-income apartment buildings.
3. Launch programs to help households sign up for federal broadband assistance and home broadband service.
4. Help states design broadband plans to take advantage of federal funding.
5. Demonstrate innovative projects and create playbooks for states, cities, school districts, housing authorities and other trusted institutions to scale broadband adoption.

—Matt Zalaznick

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How Options Translate Into Academic Success

Virtual schools built to outlast COVID give districts a competitive edge.

The COVID experience convinced Kennewick School District in Eastern Washington to open an alternative high school-based online program for all students in the system.

Endeavor High School allows students to fully enroll online or blend online and in-person instruction. The equivalent of about 155 full-time students are enrolled, Superintendent Traci Pierce says.

The district is now providing options to families wary of COVID's ongoing disruptions and working to prevent students from leaving for other schools or districts that may have more flexible learning alternatives, Pierce says.

Kennewick also added an online component to a K-8 program that allows homeschool families to access district instruction. Homeschool students may take math and English at home but enroll in district P.E. and art courses, she says. "It helps break the mold of 'it's got to be one-size-fits-all for every student and family,'" Pierce says. "The last year and a half has really pushed the thinking of districts all across the country."

Endeavor allows students to move at an accelerated pace because their progress is not measured by seat time. The flexibility accommodates parents who can only help students after work and on weekends, says Matt Scott, Kennewick's assistant superintendent of curriculum, assessment and professional development.

Currently, some students have chosen online mainly because of fears of COVID exposure, unwillingness to wear a mask, or other pandemic-related issues. "What we'll expect moving forward is more and more choice based on what a student needs, not what a student is going to be exposed to," Scott says. "More students will engage

because it's what works best for their individual learning."

Counselors, principals and other educators at individual schools are expected to be candid with families about the expectations for online learning and that students need the ability to work independently, among other skills, to be successful, Pierce adds. "We've had some families, once they've been in online learning for a few weeks, realize it isn't a good fit," she says. "So we've needed to be flexible and adaptable to let families return to their neighborhood school."

Hoping to build and grow online

In the same region, the Pasco School District launched the PIXel e-learning academy this fall to provide synchronous online learning for students in K-8.

The state of Washington required schools to have an online option this year, and Pasco Assistant Superintendent Mira Gobel says PIXel is a COVID-era innovation that will be an option for students well into the future.

The approximately 350 students in the academy spend 70-80% of their time participating in live, online learning with a Pasco schools teacher who is also at home and uses the district's curriculum.

The rest of the time is devoted to independent work, teacher office hours and other asynchronous activities. The district's vision is for virtual learning to mirror in-person learning as closely as possible, including the amount of time remote students have to interact with teachers, Gobel says.

The district has developed PIXel so the academy can also accommodate students with IEPs and its dual-language program. Administrators are now working to add "specials" such as art and music.

"Our goal is not to stop doing this because COVID goes away—this is something we're hoping to build on and grow as a viable learning option for our students, families and teachers," she says. "We have some teachers who are thriving virtually—they love it."

—Matt Zalaznick





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VIRTUAL REALITY COMES OF AGE IN K-12

New platforms, enhanced content are making VR and AR more powerful teaching tools that are here to stay.

Virtual reality represents the cutting-edge of education not just because of the rapidly advancing—and incredibly cool—technology.

Because the deeply immersive experience of VR stimulates all of a student's senses, the blend of hardware and software can engage students more deeply in their lessons, says Brian Moynihan, global education solutions manager at Lenovo, maker of VR Classroom. "People are more emotionally engaged in VR, they're more focused and they're also using more of their brains," he explains. "When you're looking around right and left and it's responding to your actions, it's making you pay attention and giving you that sense of efficacy."

And that's only one of the reasons virtual reality in K-12 instruction seems to be coming of age. Constantly improving, multidisciplinary content and the wider acceptance of digital learning post-COVID means students donning headsets to dive into virtual worlds will be a more and more common sight in our classrooms.

"An image is not instruction"

VR and augmented reality lessons are more memorable because they reach stu-



NEW NORMAL — Constantly improving content and the wider acceptance of digital learning post-COVID means students donning headsets to dive into virtual worlds will become a more common sight.

dents on a visceral level, says Chris Klein, a U.S. representative for Avantis Education, which makes ClassVR. Like Lenovo's VR Classroom, ClassVR is an all-in-one platform that includes headsets, software, content, management tools and other elements.

In the past, teachers had little to no control over the activities of a class-

room full of students wearing individual headsets. These next-gen platforms give teachers that ability and also eliminate the need to download apps or games, though both VR Classroom and ClassVR allow users to add outside content. ClassVR's management portal also allows teachers to, among other things, make sure students are



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staying on task during a VR session, Klein says.

Rather than apps, ClassVR's content is built from a library of 1,700 images, video and 3-D models but teachers remain the key. In that way, ClassVR is an on-again, off-again tool, meaning the learning experiences students have in headsets must be augmented with teachers' instruction and class discussions. "An image is not instruction, it's a resource to support instruction," Klein says. "Having a 3-D model of a beating human heart doesn't teach you anything if it's not rolled into an anatomy lesson when students take their headsets off."

ClassVR offers Avanti's World, which Klein called the first educational VR "theme park," where students can visit the moon, float through a blood vessel or time-travel to meet dinosaurs. Teachers and students can also add their own content. For example, a school in Louisiana bought 360-degree cameras to take their own VR videos of trips abroad and other experiences. And a fire department in Georgia uses the headsets to conduct outreach to local schools and show students when happens inside a fire.

"An element of joy and surprise"

In another leap forward, more of the content is now aligned with state and local standards rather than providing just a one-off lesson. Providers are offering extensive training to teachers, but they also want a VR platform to be user-friendly to reduce the barriers to usage, Moynihan says. VR headsets also eliminate distractions, such as texts and email pings, that can disrupt students and teachers using laptops, tablets and other devices.

The emotional connections student can make, with giraffes in Africa, for instance, are among the biggest breakthroughs of VR. In one VR Classroom video, students can feel a giraffe nudge the camera. "It really drives home the point when the teachers says that 90% of giraffes have disappeared from Africa," Moynihan says. "A giraffe nudging the camera also gives an element of joy and surprise."

In another example, teachers can use a video animation of the Roman Colosseum to teach math by examining measurements, as well as social studies by pointing out how similar the structure is to a modern football stadium.

VR Classroom's animation also shows where different classes of society sat in the Colosseum: The emperor stat up front with the wealthiest citizens and commoners just behind, while poor Romans, women and slaves sat highest up and farthest away from the action. "It shows people weren't that different than we are today," Moynihan says.

"We've heard a kid say, 'This art is dope.' We've heard a lot of kids say, 'This experience is lit.' They feel like it speaks to them, and that's about as great a thing as we could have possibly built."

- Beth Maloney, Act One

But VR can be used for more than just these types of visual lessons. It can also help students develop soft skills by simulating job interviews or, in health science, how to deliver a difficult diagnosis to a patient. And while some in education believe the concept of learning styles is more myth than reality, VR can bridge the gap between students with different strengths and weaknesses, Moynihan says.

"All of us have all of those capabilities," he says. "When instruction is presented in multi-modal form, it hits multiple aspects. You're not learning about a fulcrum in a book; you're pulling up and down on a rope."

"This art is dope"

In a unique use of VR, a nonprofit in Arizona is using VR headsets to bring arts education to students who tend to have less access to cultural activities.

Act One previously took Title I students in Phoenix and Tucson on arts-related, in-person field trips. But the organization realized there were plenty of students in the vast rural areas outside those cities who weren't being reached, says Beth Maloney, the nonprofit's director of arts education.

The organization's two sets of 50 traveling VR headsets are Wi-Fi-enabled, so they work in communities where internet access is less reliable. Act One is now working on expanding its content library, and its current experience capitalizes on the popularity of the mural movement in the U.S.

Along with Arizona's vibrant history of public art, the VR field trip brings students to the Detroit Institute, where major works of Mexican artist Diego Rivera are on display. In another "chapter" of the field trip, Phoenix-born muralist Joseph Perez, who now works in Chicago, brings students into his studio and shows off murals in the city.

"In between chapters, students are taking off the headsets and having guided discussions," Maloney says. "Half the learning experience on any field trip is talking to friends and comparing the things seen and all the processing that goes along with that."

The organization also has built-in accessibility features, such as Spanish subtitles and the ability to raise and lower the brightness of the images, and the field trip can be experienced on a tablet with headphones for students who aren't comfortable being fully immersed.

"We've heard a kid say, 'This art is dope.' We've heard a lot of kids say, 'This experience is lit,'" Maloney says. "They feel like it speaks to them, and that's about as great a thing as we could have possibly built." **DA**

Matt Zalaznick is DA's senior writer.



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SCAN FOR DETAILS

Esports: The Best Vehicle to Reach All K-12 Students



The pandemic may have slowed the fervor, but interest is still soaring.

by Chris Burt

The COVID-19 pandemic dramatically altered the landscape of esports in education—taking most gatherings virtual, at least early on—but the allure hasn't subsided.

Dedicated educators, popup nonprofits, leagues and embedded organizations have rallied to bring gaming and curricula into K-12 schools with the same mission: give kids a chance to play and build future pathways. That is especially true for students who struggle to make connections with peers or get involved in other activities.

Those who are united in the cause say the challenges, especially for tired teachers and cost-conscious administrators, are immense. But they agree that the investment is worth it.

"It's a challenging time. COVID has had its impact on the entire ecosystem and structure of education," says Gerald Solomon, founder and executive director of the North America Scholastic Esports Federation (NASEF), the pioneer in offering academics through esports. "But the kids who engage in the data, engage in the writing, they just shine. We're seeing increased attendance in school. We're seeing re-engagement in the public educational system, especially when it's wrapped in a very strategic and thoughtful educational, scholastic ecosystem."

Despite fallout from COVID-19 and a heavy switch to virtual (where it is native anyway), esports is still very strong, Solomon said he is seeing growth in the U.S. and across the world

through its many partnerships with international organizations. Two years ago, the High School Esports League (HSEL) had about 80,000 students participating. Now it has more than 140,000 and serves more than 3,400 schools.

Kristy Custer, Vice President of Educational Innovation at the HSEL and a former principal of the year in Kansas, says schools that haven't climbed aboard yet should strongly consider it. "I'll give you a list of 80 reasons why we should bring esports into school, but we immediately saw attendance jump and kids were so engaged. It was like a silver bullet. But if all this does is bring a little joy to kids and teachers, and a little laughter and joy to the classroom right now, that's enough."

STUDENTS AT PORT WASHINGTON HIGH SCHOOL'S GAME ROOM—in Wisconsin compete this season during junior varsity Overwatch and Smash Bros. matches. (Jeff Wojcik/Port Washington-Saukville School District)



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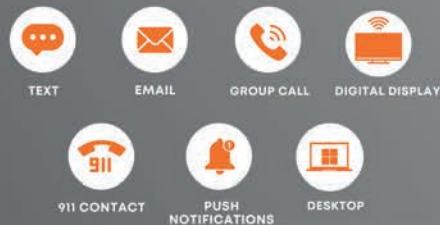
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Joy = Better student outcomes

The data back that up. According to Generation Esports, which runs the HSEL, attendance among students rises about 10% when kids are engaged through esports and their grade point averages jump about 1.7 points. But it's the SEL piece, the career track connection and the ability of esports to provide unique accessibility to all that make it a champion in schools.

Custer, who along with fellow former educator Michael Russell developed the Gaming Concepts curriculum that has been downloaded 400,000 times, noted that one high school educator told her that esports "normalizes the virtual playing field" and has become one of the top five activities at his school in just a year. Because of its reach and inclusivity, it brings in more unengaged students and gives them purpose academically because of the positive reinforcement provided in a structure environment. Esports reaches the seemingly unreachable populations.

"You can come to the esports team and be whoever you want to be," Custer says. "One of the most foundational things that we learned [from a research study done this fall of a big high school district], is that 7% of the students gaming were from the LGBTQ community. All nine top sports combined are only getting 9%. Esports is capturing a marginalized, high-risk community, and we are helping them belong to something. It crosses a lot of social-economic boundaries."

What attracts students initially, of course, is the rush of playing. Aside from relevant paths that can open doors to careers in shoutcasting, digital arts and coding, there are huge opportunities for kids to game. A myriad of organizations offer everything from pay-to-play models to free challenges and pop-up events from NASEF such

as Rube Goldberg, Minecraft and Farmcraft challenges. The HSEL and other platforms offer serious tournament play from Overwatch to NBA2K at the high school level, and Rocket League and many other games for middle schoolers at per semester and yearly costs to schools. Game developers are also trying to tailor new titles for younger kids.

Though monetary models have been criticized at K-12, semester and yearly fees at HSEL and MSEL aren't too pricy (\$1,500 and \$750 per year, respectively), and schools have been tapping into ESSER funds to make that a reality. One deep consideration of course is costs of equipment. Though schools can get a jumpstart with Nintendo Switches and consoles, the best environments have gaming PCs.

"The kid in Chicago, the kid in Wichita need access to high-quality gaming equipment," Custer says. "You get those high-dollar PCs to spark that interest and lay that digital foundation for those kids so they say, this is fun. It is a huge equity and access piece. Some students are not playing on PCs. They're asking for PlayStations and Xboxes, so they can play NBA2K. Why? Because they're within the monetary range."

Aligning gaming with education

Esports curriculums vary from free to pay but are continually updated and provide a way for schools to deliver that key element that makes esports different from traditional sports—the learning element. For example, NASEF offers free English Language Arts Integrated Courses that align with content standards, career technical education and middle school modules that focus on translatable esports skills. HSEL, long known as a competition arm for esports in K-12, has made a huge commitment to add more education tie-ins,

including the addition several years ago of Gaming Concepts along with the recent hiring of more than two dozen educators.

Gaming Concepts has gone from book to updated series and includes the introduction to esports (a primer for educators just getting started) as well as a technical piece on digital arts (Level 2 coming Fall 2022) that can be positioned as part of an interactive arts pathway. There is also 1.1, which focuses on "30 moments in mental health" that is being piloted among 1,600 students that includes concepts such as fighting toxicity, self-esteem, self-efficacy and self-regulation. A new Gaming Concepts 3.0 promises to be eligible for CTE funding.

The offerings from both organizations, and of course the heady work by independent teachers just simply doing it on their own, are helping students get to that level, not as gamers but taking that knowledge and earning scholarships to colleges and universities.

"The whole concept of gaming and esports by itself is a relatively closed environment, but when you wrap around social-emotional learning opportunities, curriculum, career pathway education and awareness, it is a whole new world," Solomon says. "When you give a child an opportunity who doesn't know that it exists, doesn't see a future for themselves—I really love art. I can make a career in art around gaming that I love to do, and actually earn a living doing that—or in a sundry of other workforce skill opportunities that's powerful. We continue to hear, especially around ELL individuals that say if it weren't for our ability to communicate, be on teams exhibiting leadership, we would not be as proficient in communication and English without that." DA

Chris Burt is the associate editor of District Administration.



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- **You must be present to win!**

Agenda:

- **Wednesday, January 26**

2:00 p.m. | *The Borderless School - Hybrid Collaboration*

3:00 p.m. | *Protecting your school, protecting your students*

- **Thursday, January 27**

11:00 a.m. | *Improving accessibility, manageability, and learning outcomes with Windows 11*

12:00 p.m. | *Esports - You know why...but do you know how to manage it?*

2:00 p.m. | *Immersive learning, IT and teacher management made simple*

3:00 p.m. | *Digital safety: Protecting student well-being in the classroom*

- **Friday, January 28**

10:30 a.m. | *The Borderless School - Hybrid Collaboration*

11:30 a.m. | *Protecting your school, protecting your students*



NO PURCHASE NECESSARY. A PURCHASE WILL NOT INCREASE YOUR CHANCES OF WINNING. Open to all registered attendees of the Future of Education Technology Conference (FETC) held January 25th - 28th, 2022, in Orlando, Florida, who are legal residents of the fifty (50) United States and District of Columbia age 18 and over, and who are employed by any public or private educational institution entering solely on behalf of such educational institution. Starts January 26, 2022 at 12:00 pm ET, and ends January 28, 2022 at 11:00 am ET. For Official Rules, odds of winning and prize descriptions, visit <https://esg.us/fetc-rules/>. Void where prohibited. Sponsor: Lenovo (United States) Inc., 8001 Development Drive, Morrisville, North Carolina 27560.

intel



Honoring Innovation in Ed Tech

The second annual “Top Ed Tech Products of the Year” awards are here.

This year we received more than 130 submissions and our three-judge panel reviewed them all.

To be eligible for the honor, tools must have been developed within the last year and generally available last fall. Submissions were judged on their innovation in the ed tech space. The 15 winners will present their products during three sessions at this year’s FETC.

Here are the winners and some of the judges’ comments about them.

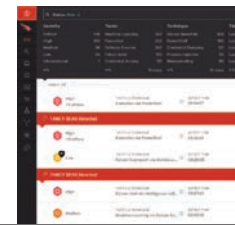
SchoolStatus - Communication Platform featuring Video Chat

JUDGES’ COMMENTS: “I like this tool because it has so many different ties into elements districts need to communicate,” and “Builds efficiency into teacher-parent communication while tying lots of data together in one place.”



CrowdStrike’s EPP Managed Detection and Response, Falcon Complete

JUDGES’ COMMENTS: “No breaches is a pretty good story,” and “With the rise in ransomware attacks against schools and districts, this is a much needed product to protect sensitive information.”



Lexplore - Rapid reading assessment

JUDGES’ COMMENTS: “AI and eye tracking is so sophisticated reading analysis assessment,” and “This streamlines reading assessment for teachers and students. Innovative use of eye tracking and AI.”

IMPACT™: Rapid-cycle Evaluation by LearnPlatform

JUDGES’ COMMENTS: “Very interesting tool, providing great information on the value and results. Given the mass spending spree over the last 18 months this type of analytics will provide districts valuable information to establish long-range financial plans.”

eGlass – Transparent writing glass with built-in camera

JUDGES’ COMMENTS: “This is a very innovative product. I like the fact that teachers are facing their students and it can link to any device in the classroom,” and “This is the first such product I’ve seen where the teacher can face the students while writing on a board. The students seem genuinely engaged with this approach.”



Paper – 24/7 tutoring

JUDGES’ COMMENTS: “Tutoring is one of the most effective ways to address learning loss or deficits. This seems like a big need filled.”



Kai’s Clan – Collaborative coding platform

JUDGES’ COMMENTS: “I like the fact that it combines robotics with AR/VR. Kids can code robots from around the world and then turn around and actually through VR drive them,” and “Powerful tool in that it can be used to teach simple coding to much more complex coding, so it enables students to grow with it.”

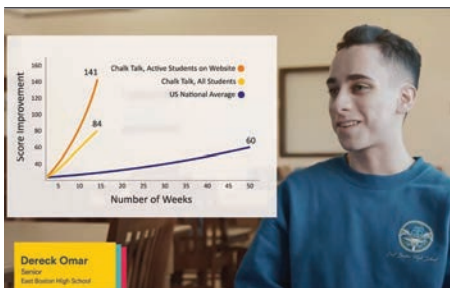


TutorMe – On-demand tutoring

JUDGES' COMMENTS: "For at-risk kids this could be a good solution to offering additional supports," and "The data supports this as a highly effective supplement to help students succeed."

Square Panda Literacy System

JUDGES' COMMENTS: "Creative product for early readers. I like how it ties learning on the iPad with physical book reading," and "Very strong testimonials from current users."



ChalkTalk ELA and Math Instructional Materials with Computer Adaptive Practice

JUDGES' COMMENTS: "This platform not only shows success in improved standardized test scores, it also saves teachers time by generating custom lesson plans and teaching materials for every day in a given schedule."

Therapy Essentials from PresenceLearning

JUDGES' COMMENTS: "This is a special ed solution that is needed, especially during a time when some distance learning is still happening," and "A godsend for smaller districts that don't have the resources to offer staff clinicians."



Edthena - Video observation and collaboration platform

JUDGES' COMMENTS: "I like this tool to improve PLCs. Also a great tool for coaches to leverage for one-on-one improvement plans with teachers," and "While it may not seem very innovative, many teachers need this."

LEGO Education SPIKE Essential: An Engaging, Hands-On STEAM Learning Tool



Judges' comments: "LEGO has a proven track record," and "This STEAM kit combines literacy, math and social-emotional development, all in a format that elementary age students are familiar with."

ClassVR – Virtual reality teaching headset

JUDGES' COMMENTS: "While it is one of the more expensive products we reviewed, this VR and AR solution provides all of the elements – headsets, controllers, lesson plans – for a full virtual learning environment."



Microsoft - Reading Progress in Microsoft Teams

JUDGES' COMMENTS: "A really nice free resource for students and teachers," and "A powerful tool to help all students become proficient readers while maximizing teachers' time."



10

CAN'T-MISS SESSIONS AT FETC THAT WILL INSPIRE EDUCATORS AND LEADERS

These key discussions on emerging tech, leadership strategies and cyber safety can supercharge your districts.

By Chris Burt



The technology event that has something for every K-12 educator and administrator features a program that is both spectacular and mind-blowingly large.

Finding that perfect session to attend at the Jan. 25-28 Future of Education Technology Conference requires a bit of planning and precision, with hundreds of discussions and special workshops across five key categories. They all feature experts in the field, those who've either shaped learning through technology or led the way on its implementation in small and large districts across the nation.

While featured speaker sessions and keynotes are always annual highlights, especially the engaging Tech Share LIVE!, there are scores of signature talks and dynamic leaders that should not be missed. From those, we have selected 10 sessions that are sure to be standouts at the Orange County Convention Center in Orlando:

1 LEADING AND TEAMING WITH DISTRICT TECHNOLOGY LEADERS: THREE SUPER-INTENDENT PERSPECTIVES. Want to ensure your district's digital transformation goes smoothly? Renowned education consultant Ann McMullan will lead a discus-

sion with superintendents Mark Benigni (Meriden Public Schools, CT), Scott Muri (Ector County ISD, TX) and Matthew Miller (Lakota Local School District, OH) on how they support and leverage the innovative work and input of chief technology officers and leaders.

2 ESPORTS: WHAT THE RESEARCH SHOWS ON STEM & SEL BENEFITS. Dr. Constance Steinkuehler, professor of informatics at the University of California, Irvine, and national leader on gaming, showcases the amazing and academically enriching world of esports in education. Attendees will learn how gaming can boost STEM learning, school interest, relationships with peers and adults, and empower self-regulation.

3 CYBERSECURITY CONSIDERATIONS WITH DISTANCE LEARNING AND REMOTE WORK. The expansion of networks beyond physical campuses has left schools more vulnerable to hackers and ransomware attacks. Lorrie Owens, Chief Technology Officer for the San Mateo County Office of Education, will break down key strategy and cybersecurity practices that can keep student information and data safe.

4 TWENTY-TWO FOR '22: TOOLS AND TRENDS TO INSPIRE & MOTIVATE. In this "fast-paced, lighthearted session guaranteed to tickle your geeky side," Dr. Maureen Yoder will impart inexpensive new tips and tools—from AI, AR and VR to drones, robots and coding—that can make any teacher shine while truly activating classrooms.

5 DISTRICT TECH LEADERS POWER PANEL. Reliance on other leaders during the pandemic has been essential for district technology leaders, and this panel

led by Greg Bagby of the Hamilton County (TN) Department of Education will discuss the benefits of remote changes and teamwork across districts and the adaptation of face-to-face plans.

6 ENGAGING EDTECH IDEAS FOR DIGITAL CITIZENSHIP & SOCIAL/EMOTIONAL LEARNING.

Christina Nunez, Educational Technology Specialist Trainer at Albuquerque Public Schools, addresses five key areas of digital citizenship (including media literacy, privacy, cyberbullying and hate speech) and SEL (including social awareness and responsible decision-making).

7 HOW WE USE TECH TO BUILD TEACHERS UP THROUGH FEEDBACK.

Michael Meechin, principal at NeoCity Academy (FL), will discuss how leaders can quantify the benefits of technology and give customizable and immediate feedback to instructional staff. The goal: offering technology that teachers want to improve their schools and student outcomes.

8 EMERGING TECH: TRANSFORMING CLASSROOMS WITH AI, AR AND VR.

Rachelle Dene Poth, Spanish and STEAM teacher at Riverview School District, and Jaime Donally of ARVRinEDU, will give attendees a primer on how new technologies can be implemented into classrooms to spark learning and excitement.

9 STEM SAVES THE WORLD! COMING TO A SCREEN NEAR YOU!

In this mega session, TV creators and producers Kari Byron and Jenny Buccos of EXPLR Media talk about the importance of creative media in STEM subjects, especially science, while highlighting the impacts of storytelling for students.

10 EDUCATION IN THE CROSS HAIRS: K12 VS. CYBERCRIME.

A deep concern for any district, online crime has led to big payouts and data vulnerabilities. Get guidance from retired FBI Special Agent Scott Augenbaum and leaders from Forward Edge on mitigation strategies, the need for layered security, federal and state data privacy law implications and funding options. **DA**



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The Deepening Crisis of Network Security

Educational institutions are a top ransomware target. What can you do?

By Amy Chang

Just prior to Labor Day, the FBI and the Cybersecurity and Infrastructure Security Agency (CISA) issued a warning about how they have observed “an increase in highly impactful ransomware attacks occurring on holidays and weekends,” and to be “especially diligent” in network security practices leading into them. That weekend, Howard University was one of the latest educational institutions to fall victim to attacks; it remained offline for over a week after the incident occurred. Faculty and staff were asked not to plug anything into Howard’s networks.

Howard University is only the latest example of educational institutions that have suffered a ransomware attack. In 2021, there have been at least 29 major attacks against the education sector.

Educational institutions’ IT teams spent much of 2020 working to get students, teachers and staff online for remote learning in response to the coronavirus pandemic, likely introducing a fair number of new vulnerabilities and attack vectors for state-sponsored and criminal actors alike. Furthermore, education and higher education institutions can be poorly equipped with legacy information technology systems, understaffing, and limited budget resources to dedicate to cybersecurity, exacerbating potential weaknesses in schools’ technological infrastructure.

The crisis facing the education sector becomes even direr when we consider one survey that found recovery costs are “48% above average.” Considering all aspects of a ransomware attack (including downtime, device and network costs, ransoms paid), the total cost averaged \$2.73 million.

Some institutions have turned to cyber insurance to transfer risk, which is also controversial because institutions are not addressing the underlying cyber risk that still exists. But insurance can provide real solutions to the problem.

It can put incentives in place to change human behavior for the better. While cyber insurance can help drive towards these solutions, cyber-resilient technological infrastructure can only be built on a solid foundation. Before considering any fancy tech solutions, consider conducting an inventory of all the technological assets on your networks, because devices that are unknown or not actively tracked cannot be successfully scanned, logged, managed or monitored. Following are five key controls you can implement to greatly reduce the chance of being successfully targeted by ransomware.

1. Conduct regular and redundant backups: If a ransomware incident does occur, the most effective strategy for recovering is restoration from recent, clean and encrypted backups. Organizations should review and update corporate backup policies and perform a thorough audit of all business data and where it is stored.

2. Conduct rigorous security awareness and training: With malicious actors often lurking at an institution’s doorstep, solving the human element of ransomware has been a perpetual conundrum for the security community. Many infection vectors require a human to grant access into an organization’s network, and many people do so unknowingly. In order to prevent this, organizations should make appropriate resources readily available, including regular training for employees about

the dangers of phishing, unsecured networks and endpoints, and other key elements of cyber hygiene.

3. Ensure proper email security controls: Email is the most commonly used vector to deliver malicious payloads to an end user. Advanced filtering and sandbox capabilities can also be used to detonate potentially malicious indicators and block those emails either at the firewall or at the email gateway.

4. Protect endpoints: Keeping track of devices within an organization (endpoints) becomes increasingly difficult as a business grows. In order to properly monitor endpoints, organizations need to consistently track their inventory with an up-to-date list.

5. Network Security: The network is an interconnected artery to your organization; therefore, it is important to establish stringent access control lists throughout in order to minimize risks to the business. Activity should be analyzed over time to understand legitimate network patterns and enable organizations to distinguish this activity from anomalous network activity. Network segmentation can provide physical or logical separation of networks and secure sensitive or personally identifiable information (PII) from unauthorized users.

While not exhaustive, this is a helpful start for IT and cybersecurity teams to implement and stymie the rate of ransomware attacks on a critical sector of the U.S. economy. **DA**

Amy Chang is Head of risk & response at Resilience. She served in the U.S. Navy as an intelligence officer and is a graduate of Harvard University Kennedy School of Government and Brown University.



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