Moving Education Forward in 2021 (Moving Education Forward in 2021 – Connected IT Blog (connection.com)**)**

Shannon Barnes December 30, 2020

2020 got a bad rap—appropriately so—because of all we had to do as a country to get through the hurdles it presented. Decisions were life or death—for people, companies, and education. We reacted and scrambled to stay above water and push through the best we could. 2020 was reactionary, and we did the best we could with the circumstances. Now that the year is winding down and with the release of the vaccine the end is in sight, we will be entering the "next normal". What does that mean for education? We deployed computers by the thousands in school districts that were purchased not from planning, evaluating, budgeting, then procuring—but rather from the need to get kids into a virtual classroom, essentially overnight, and bring as much content to the delivery of education as we could. The machines purchased were less "you're the one," but more "you'll do for now," because it was what schools could get their hands on.

I had the opportunity to sit down with Pam Aulakh, Connection's K–12 Vertical Alliance manager, and Kevin Schmid, Intel's Public Sector Alliance manager, to get a boots-on-the-ground perspective from the many customer engagements they are having with school districts across the country.

What are some new challenges that schools and agencies are facing when it comes to remote learning that might be less well known, and maybe aren't making the news the way "Zoom bombing" incidents in classrooms have in recent months?

Pam
There are two things to address with that question. The first is about security. Every device that was purchased made a

school district's networking system more vulnerable. Most districts did not spend money toward security components, and they provisioned the devices themselves. With that, districts are slowly coming to realize the importance of addressing security. The second challenge—which districts are really working hard at (and doing a good job solving)—are connectivity issues. This leads to the realization that, when connected, the bandwidth for teachers and students may be insufficient for video calls and more.

Kevin
Pam addressed critical topics there—security, connectivity, and access are super important topics right now that are taking place behind the scenes. I would add that it creates a manageability challenge. Help desks have been overwhelmed because the paradigm has completely shifted under their feet in terms of how they're delivering support. This is a challenge that is continuing to be addressed.

Looking ahead into 2021 and beyond, how do you think delivery of education will evolve beyond what's happening today?

Pam
Referring to the help desk, the challenge will be supporting not only district technology remotely, but also family-owned devices. Their customer base changed from staff to include parents of all levels of technology capabilities. Some districts just aren't set up to be able to help them—adding to the struggle. Regarding the future, there were a lot of great lessons we learned in 2020. The disruption that we've experienced is going to change the future for the better. We're going to continue to see districts offer more-robust virtual and online learning opportunities. Those things that were evangelized by smaller groups of people in a district—in terms of remote and hybrid learning—are now being repeated by millions of people in order to support their students. This new model of learning will be the standard going forward.

Kevin
The ability to access virtual learning is going to be with us for a while. Think about a rural student who can now access classes they could never take before. Remote learning is a great way for us to not only meet the kids where they're at, but also to provide them access to content, teachers, and coursework that they just wouldn't have had access to otherwise. Currently, we see articles discussing how virtual learning is not working right. And you know what, for the most part, we were never wanting or needing to go 100 percent virtual. It does work for *some* students. But for many students, this isn't the right learning paradigm to use full time, all the time. As we shift into the future, a hybrid or blended learning model offers the classroom the option to assign some kids to work with digital tools, allowing the teacher time to address very small groups of kids on more of an individualized basis. I think that, as we begin to really start to look into the future, it's going to be about managing those learning paradigms by leveraging the technology tools in unique and creative ways that actually free up instructional time for the teachers and provide them more meaningful data based on how their students are doing.

Should decision-makers in education and government also be concerned with user experience in the technology that they manage?

Pam
Absolutely. When choosing technology, considering how it will be used is so important. An area that we mentioned earlier is video capabilities. You can save money by purchasing a lower-priced device. However, overlooking features for the sake of price may not provide the technology needed to support the way that they're going to deliver and receive instruction. The IT decision-maker needs to take that user experience into consideration for everything—not just the students, but also for the teachers.

Kevin
I couldn't agree more. An IT professional who's not paying attention to user experience right now is really going to find themselves in a difficult situation. The users are going to demand functionality and won't understand why you bought a device that barely—if at all—meets the needs of today. You really need to be future planning when you're buying and purchasing technology today and considering what the true utilization of the technology will be prior to purchase.

Pam

And really, the keywords for 2020 and 2021, in terms of technology purchases, should be flexible and agile. When purchasing technology, they need to make sure, as Kevin said, that it serves their current needs, but also is going to serve their future needs—and also be future-proofed.

When it comes to 2020 technology buys, what have we learned?

Pam

It was emergency-learning support. It was, "I need it now. Otherwise, I don't know where all my kids are." So the buys were to meet immediate need, and districts took what was available that they could procure in large quantities. Now districts are moving forward with more strategy involved in what they're looking to purchase.

Kevin

There wasn't time to evaluate new devices, software applications, and use models. It was simply getting purchase authorizations for devices approved, purchased, and pushed out immediately. Now we have the opportunity to go back and revisit this.

Pam

A great example I have is we were discussing different types of devices for a flexible classroom with a customer. They were originally looking at basic touch devices. In the end, they moved to a more robust platform that still had touchscreen for their teachers because of the flexibility and agility the better system afforded. The technology they decided on was a future-proof device. That is a great example of beyond the right now.

Kevin

The usage paradigms have changed for how applications are being used—and their requirements. We talked a little bit about security and manageability. Videoconferencing is a newer application that school districts are now testing as part of their decision-making criteria for student devices. In business, we have all been in video meetings with blurred or virtual backgrounds. Before 2020, those were nice-to-have features. In remote work environments, it's actually critical to create some privacy for folks as they're working from home full time. That background takes a lot of processing power. The requirements to make that happen on a device now look different than they did in the past.

Intel is launching its 11th Generation Intel® Core™ processors now. What would you want education or government IT decision-makers to know about products featuring Intel—which might be a better choice for them? Also, what should be considered with Intel® vPro™ technology when it comes to administrator, teacher, and government devices?

Kevin

We are super excited about our 11th Gen processor launch. This is a really, really big launch for us. We're seeing a lot of capability in this processor and what it's going to enable for the platforms that our various OEM partners bring to market. It's going to be, if we look at it from an education perspective, one of the most secure and manageable devices that they're going to find out there. The processors address those big areas we discussed today.

11th Gen processors have improved performance over prior generations. When we talk about the new usage models that teachers are experiencing now with Zoom, Intel offers built-in artificial intelligence that helps with background noise. They also do CPU offload. We improved performance for videoconferencing and background usage—which has become so prevalent. Finally, was that it has a real focus on battery life. In our internal testing of an 11th Gen product, we got longer battery life running full HD video[1]. This really should provide a better impact, particularly as we transition back into the schools. We know that will be happening at some point, and the kids and teachers are going real-world battery life. 11th Gen really addresses our discussion around future-proofing your devices, and the new processors are really made to help with that future-proofing exercise.

Pam

The ability to support what the teachers and students need to do on devices with a future-proof strategy is key. The conversation should never be about what the device can do. It should be about what do they need to do to deliver

lesson plans and then find the right device to support it. In 2020, we saw that in reverse, where they were just needing a device—any device—that could cover the basics to get up and running. There was no time to think then, like there is now, about user experience and what the goal was for using those devices.

Technology plays a very important role in employee and student experience. Especially now. I would think that IT decision-makers in education and the public sector who are looking to attract and retain the best people would want to put an emphasis on experience—especially as it relates to the devices they provide. How do you see modern technology helping to create the best employee experience?

Pam
Equipping teachers with a robust toolbox of technology is great, but it must be balanced with ongoing and sustainable professional development programs that ensure teachers have the skills to use technology the way the purchasers intended. With the current situation, I think we are going to see changes in higher education with teacher preparation programs. Most of these programs graduate teachers with some level of technology skills, but I think that new teachers are going to have the expectation that whatever district they teach in is going to be committed to providing them with the right tech tools for success in new learning environments.

Kevin
Employees want to use devices that enable them to be their best selves at work. If a teacher is trying to deliver a lesson over video, utilize a Learning Management System (LMS), or needs remote support from their IT organization—and this experience isn't adequate to meet their needs—at best, you have a dissatisfied teacher. At worst, your teacher has a significant loss in productivity that also impacts the learning outcomes of students. Having the right device that has the right performance, is responsive, and allows employees to work the way that best suits their individual work styles is important.

To wrap up today's discussion, if you could only give one piece of advice about how to prioritize new PC purchases, upgrades, or refreshes to a school IT administrator—or other IT decision-maker— what would that advice be?

Pam
My advice would be to look toward solutions that are flexible and agile that suit current needs but also support future models for teaching and learning.

Kevin
Many students have been issued devices that may have been adequate in a school setting but may not be as functional for blended or remote learning. School districts are already seeing drops in enrollment across the US. They need to ensure that the students they serve have solutions that meet modern learning requirements. Students need to have enough bandwidth and a device with adequate performance to ensure an overall good experience with videoconferencing and collaboration tools. In addition, student devices need to support remote management and they need to have enhanced security features that protect students.

What's next
We are now planning for the future. The schools that once strived to have 1:1 devices now demand it. Education devices must be robust enough to deliver on student needs—often meaning there are many applications working in concert to conduct the day's work. The devices that were "grabbed up" are not necessarily going to fit that bill in the long term. This is the time where we want to plan our technology purchases for years to come.

One good takeaway for 2020 was that we learned a lot. We learned what we need in technology to deliver a robust education in any environment. We found opportunities for professional development that will carry us past a pandemic. Some of us even learned how to make sourdough bread. (That was definitely a 2020 thing!) Now, we move forward, more agile and evolved, planful, and prepared.

If you have questions on choosing the right technology, we are just a click away! Go to connection.com/intel and fill out the form at the bottom of the page. We will be glad to get you connected to the resources to help you plan your technology strategy.

Notices & Disclaimers

Performance varies by use, configuration and other factors. Learn more at www.Intel.com/PerformanceIndex or www.intel.com/11thgen

Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. See backup for configuration details. No product or component can be absolutely secure.

Your costs and results may vary.

Verified, measured and tested against a premium specification and Key Experience Indicators as part of Intel's laptop innovation program Project Athena. Testing results as of August 2020, and do not guarantee individual laptop performance. Power and performance vary by use, configuration and other factors. For more complete information about performance and benchmark results, visit Intel.com/Evo

Processor: Intel® Core™ *i7-1185G7* processor (TGL-U) PL1=28W with Intel® Dynamic Tuning Technology (Intel® DTT) enabled, 4C8T, Memory: LPDDR4-4267MHz, 16GB (2x8GB), dual channel and dual rank, Storage: Intel® 660p M.2 PCIe NVMe SSD, Display Resolution: 19×10 expect Lifestyle workload (4K), OS: Microsoft Windows* 10 20H1-19041.326 Power policy set to AC/Balanced mode for all benchmarks except SYSmark 25 which is measured in AC/BAPCo mode for Performance. Power policy set to DC/Balanced mode for power with UX Slider set to Better Battery. All benchmarks run in Admin mode, Graphics: Intel® Xe Graphics, Graphics driver: 27.20.100.8431, Bios version: TGLSFWI1.R00.3284.A00.2007091654 measured on Intel reference board. Temperature: Tc=60c for all IA performance measurements. Tc=85c for all Graphics performance measurements. Processor: AMD *Ryzen™ 7 4800U* processor, 8C16T, Memory: 2x8GB DDR4-3200MHz, Storage: Western Digital Corporation PC SN730 SDBPNTY-512G-1101, Display Resolution: 19×10, OS: Microsoft Windows* 10 Pro 10.0.19041.330, Graphics: AMD Radeon(TM) Graphics, Graphics driver: 26.20.14042.3009, Bios version: F0CN15WW measured on OEM system based on highest available performance profile.

9 or more hours of real-world battery life on laptops with FHD displays: Time taken to drain from 100% to critical battery level while performing typical workflows in a realistic environment. For more complete information about performance and benchmark results, visit intel.com/Evo.

4 or more hours of battery life in a 30-minute charge on laptops with FHD displays: Charge attained from OEM-default shutdown level. For more complete information about performance and benchmark results, visit intel.com/Evo.

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