♪ [music] ♪ - [Philip] But, if we work together as anchor institutions, we're going to move and solve things that we could wait another 10, 15 years for monopolies, who are mostly for-profit companies, will deliver to our communities, and that's what's going to get us more ready for 2030 and our students as well.

- [Christopher] If you want to learn about how some schools have made innovative investments to bring broadband access home with students, you're in the right place. Welcome to the "Sustainable Wireless Strategies for Keeping Students Connected and Learning" podcast series. This series explores off-campus, wireless solutions that school districts are deploying as a sustainable solution to provide home connectivity to students and educators.

The podcasts are brought to you by the U.S. Department of Education's Office of Educational Technology and a company that recently released wireless network brief, that is now available at tech.ed.gov/wireless-brief. Today, Lisa Palacios is back as our co-host.

She is the senior program associate for Manhattan Strategy Group. Welcome back, Lisa.

- [Lisa] Thanks.

- [Christopher] We also have joining us, Dr. Christine Diggs, the chief technology officer at Albemarle's County Public School District in Virginia. Welcome.

- [Christine] Thank you. I'm glad to be here.

- [Christopher] And then our final guest is Dr. Philip Neufeld, the executive officer in information technology at Fresno Unified School District in California. Welcome to the show.

- [Philip] Thank you. Glad to be with you.

- [Christopher] So, we're going to be talking about two projects, the ACPS, which is Albemarle County Public School at-home initiative in Virginia, and Connect To Learn in Fresno, California. All right, let's roll into it, and I like to start by giving people a little sense of the areas of the country we're talking about. So, Christine, I'll ask you to start by telling us a bit about Albemarle County there in Virginia.

- [Christine] We are located in Central Virginia. We are the county that surrounds Charlottesville, Virginia. We have approximately 14,000 students. We consider our schools a mixture of both urban, suburban, and rural. We have a lovely situation right by the Blue Ridge Mountains, which presents its own set of challenges when we try to get our students connected to the internet.

We have about 30% of our students that participate in the free and reduced lunch program, and we have about 10% of our students who report being English language learners. And we are a growing school district.

- [Christine] And probably 100% of them are fans of UVA basketball, among other things.

- [Christine] There are many fans of UVA basketball here, that's right.

- [Christopher] Phil, tell us about Fresno, which Fresno State also has some decent basketball, but probably should get beyond the sports a little bit.

- [Philip] Yeah. Well, Fresno is in, what I would call, the center of California. We sometimes are considered Northern California, sometimes Southern California. We actually are the bread basket of the world in terms of ag. We've got over 100 crops in our market that we produce. We're an urban area in the center of the Fresno County, and we have about 89% free and reduced lunch.

Seventy-four thousand students, a lot of ethnic diversity, which is our rich asset. But, the richest part of our asset is our students' abilities to thrive, and to grow, and learn when we create the right conditions for modern learning. And what we're talking about today is one of those necessary conditions for student outcomes.

- [Lisa] Phil, your network was set up and you had plans for your network out for those specific learning situations long before COVID hit. So, when the pandemic closed everything down, how did that speed up your plans? How did that affect you?

- [Philip] We had done a good job of moving forward with dark leased fiber, improving the speeds at our schools, upgrading all of our wireless, because when I first got to Fresno Unified, you couldn't trust a computer or wireless to work. And before the pandemic, we had high school principals literally saying, "Phil, the reason we don't talk to you about wireless anymore is it works everywhere that it needs to." We started to actually make sure there was wireless in quads and other areas because we recognized there were part of the community gathering spaces where students needed to be able to connect.

We had Wi-Fi on our buses. We started to learn a companion device, take-home device, beyond just the devices in our classrooms, because we started to recognize, I won't call it the homework yet, but I'll call it the learning acceleration gap, okay, how do we make sure every student can turn up Khan Academy to help them solve for a math problem after hours?

Because that was getting in the way of our personalized learning initiative, where we're trying to get meaningful use of technology. Teachers would say, "I can't assign this homework because..." or "this learning beyond the school because stuff doesn't work there." So, we had learning companion devices, and we had hotspots with the 1Million Project from Sprint, and then with the 10Million Project from T-Mobile.

That was all before the pandemic. But, the pandemic really...and I'll call this one of our first topographies, the community-lived experience. We saw that hotspots didn't work in certain neighborhoods, and I'd call it the Neighborhood Network, you know. And that was because there were fewer cell towers and the radios in certain areas, and that's sort of the hidden topography.

I had someone share with me the maps of where all the cell towers are. They're egregiously disproportionately in areas of higher socioeconomic conditions. Fiber was sparse in those areas of Fresno with lower socioeconomic conditions, so it's more expensive for someone to come in and say, "Here's a new cell tower," or for businesses to show up, right?

So, that was the other piece that we learned during the pandemic. And the hotspots that we were issuing, they didn't really work where we needed them to work the most. The other thing we found, and I'll call it, you know, there was this hidden topography within the community-lived experience, and that is our broadband providers. We have one of them unfortunately, we don't have great competition there, and they do a decent job.

They're considered a content provider, and the California Public Utilities Commission doesn't appear to have sufficient power to force Comcast to provide affordable and available broadband beyond 2021. The franchise is done at a state level, and they're not a broadband provider. So, what I realized during the pandemic is I needed to have a lot of bandwidth in my home because I work from home, my wife works for Fresno State, yes, the great basketball team and a great learning institution.

I had a programmer in the house, an artist, and my other daughter is studying astrophysics, so we had to get, like, a 600-meg connection. Now, imagine you've got five people in your household. You're living in probably, like, 750-square-foot apartment, and you're offered 25-meg download speeds.

And you're supposed to, somehow or the other, be able to be proficient in the modern world and show up fully, right? That's what we ran into. And that's what we have to look to solve going forward.

- [Lisa] Christine, how was your experience? How prepared were you, and how did COVID shutdowns impact your network plans?

- [Christine] We had been in the process of, Albemarle County Public Schools, of trying to develop our own LTE network using our EBS spectrum for seven years, from 2012 to 2019. It was shortly after I joined the school division that the school board asked us to really evaluate the success because in that seven years, we had only managed to connect about 100 students due to a lot of the different challenges we encountered.

And so, that is when we decided in 2019 to establish this multi-prong approach and to lease out our EBS spectrum and utilize that income to finance providing internet access for our students, whether it's broadband access primarily through Comcast, because that's our major provider as well, Phil, or through hotspots, knowing that we had a really huge range of different kind of cell coverage around our county, which exceeds 700 square miles.

We went with Kajeet because that allowed us to provide hotspots from all of the major carriers. And so, if AT&T wasn't working, and we couldn't necessarily rely on the coverage maps, so if we mapped a student's address and said, "Oh, they've got AT&T coverage," we couldn't rely on that.

So, often it wouldn't be AT&T that would get them a signal, and it ended up being UScellular's. It gave us some flexibility to provide them some coverage. Now, granted, in some areas, the signal strength was stronger than others, and we had to take that into account, but in many of our students' homes, the hotspot was sufficient enough to help get them access to learning at home, which that's what we consider, it's the learning-at-home gap.

So, we were slowly embarking on that process and had the lease signed with a major internet service provider to provide that income, it's about over $100,000 a year income that we get from that lease. And so, we had the lease signed, and we were starting to pilot the hotspots in our high schools, when the pandemic hit.

So, at that point, we already have the majority of our schools connected with dark fiber that we own. The first thing we did was we turned up our wireless signal to all of our parking lots and provided that internet access right as the shutdown occurred. We also quickly then worked with our county to put some hotspots and some access on community centers around the counties.

So, that was another part of our partnership with the county. And we had embarked on regular meetings with our broadband authority that's affiliated with the county government. At that point, then we put in a huge order for Kajeet because we went on steroids in terms of our implementation and just ordered 1,200 of them, and fortunately got our order in soon enough that we were able to acquire them about within a month of the shutdown and have them provided to our students.

So, we were well situated with our plans moving into it, but we ramped them up a lot faster than we ever expected to because of the shutdown.

- [Philip] I just want to honor that the seven years, okay, and that foresight with dark fiber and thinking about hotspots. I always remind myself and I'll remind others, our teachers, our leaders, wherever I'm at, is what are we doing to get ready for 2030?

Yeah, the pandemic surprised us, 2030 shouldn't surprise us in terms of the future of work. What competencies need to be there for students and what we need to do. I appreciate Christine's point about learning beyond school, that learning-at-home gap, right? And that's what we know will get students better ready for that future. You know, and what did we think about in 2001 or 2005 and 2010 to get us ready?

We were pretty ready, but we were surprised, and our go-to for connecting students was wireline broadband, Comcast, and T-Mobile hotspots. We've moved to 1 to 1 for our students, so that's over 70,000 computers out there, lots of interesting stories about that.

We learned after the spring of 2020 that family supports around digital literacy and tech use and all those things was really important. We've also learned and we're working hard at that, I wish we could move faster at that, but how do we coordinate all of the messaging and the approach with the community-based organizations who also are leaning in to support families in this new reality, and anchor institutions?

And Christine, to your point, we've had conversation about, you know, lighting up community centers and that sort of thing because, really, if we want students to be able to learn beyond the school and be future-ready, it isn't just about at their home, and which home is that. They may have multiple households they belong to. And it isn't just at school.

I did my research for my doctor program at Fresno State when we went to a shift in digital, how to teach them learning. This was back, gosh, 10 years ago. And what I learned through that research around students' lived experience was those in poverty didn't have good devices.

They didn't have good internet connectivity. You know, they would have to commute to school when they could have worked from home or go to the library, right? But, things like the McDonalds' and the Starbucks' Wi-Fi, they lived on that. They would actually go eat somewhere, not because they could afford to eat there, but they needed internet. So, I think we really need to think about, really, full inclusion of students from an equity standpoint means that they have connectivity in their household, they've got really good internet connectivity at schools, and then to Christine's point, we need to work with anchor institutions to make sure there's internet in the parks or LTE in the parks, and the community centers get lit up with fiber.

So, one of the things that the company that happened to win our dark leased fiber contract, and they're building out, this will be over almost 80 schools within the next year here, and we said, "You know what? We're paying for a service. It would be lovely, though, if you could bring it by every Fresno Housing Authority complex possible because we're just paying for the service. From an E-Rate standpoint, we don't care, but if you could bring it by the Fresno Housing Authority units, we'd be most pleased."

But, if we work together as anchor institutions, we're going to move and solve things that we could wait another 10, 15 years for monopolies, who are mostly for-profit companies, will deliver to our communities. And that's what's going to get us more ready for 2030 and our students as well.

- [Christine] I agree, Phil. And just to piggyback on that, our county is...they're really working now, they've opened a broadband office, and they're really working to expand fiber around the county, now want to use some of our dark fiber that we own, right? And the challenge for us is, we really would love to be able to let them use it, or even lease it, either way, but we can't because it was paid for with E-Rate money, and we have a certain period of time until that time period expires until we can let them utilize it.

And so, that's a barrier, I identify, for trying to get 2030-ready.

- [Philip] So, I think on that one, like, how could we think inside the box but change the shape and color of the box? And part of that is, one of the constraints we live with, with the least fiber, we're able to use the E-Rate-funded stuff as long as we're not creating either some new buy or new equipment purchases that fuel the beyond the school stuff.

That's my understanding. But, to your point, there is some really necessary policy thinking that's not just influenced by those big players that profit from this stuff, but in ways that think about shifting our digital landscape for the communities in ways that's going to make them thrive, that's going to have more employability and more economic vitality, and quite frankly, that's a non-partisan issue.

That makes us globally competitive and every one of our citizens able to participate.

- [Christine] In tandem with that, it's also how we measure bandwidth, and not just saying what's the up and down speed, but look at density of household or measure it by person in household, because that's also holding us back to be 2030-ready.

- [Philip] I'll advertise, we built a Windows app that's checking now on every one of our devices that's district-issued, okay, and this is all about how do we make sure these devices are working. But, from that standpoint, we're measuring upload, download speeds, latency, and then gathering that data to see where do we need to respond to support a student, where do we see gaps so that we can put the right infrastructure in place, and how do we then make sure it's available for other districts so that we can actually advocate at a state level or beyond?

So, that's something that's available open source, and our county Office of Education is looking to build an Android version of that. So, there's a Windows and Android version that will gather that data for folks. And you're talking about community reliance, you know, these are the sort of things that if we all build good ideas and share them and create the tools necessary to support them, we can move things forward across our country.

- [Christopher] You two have both explained how you move forward with your approaches after you notice that the job wasn't getting done by the existing ISPs. And I think it's important to note that. But, I'm also curious to what extent, if you compare, or is the experience of the student better on what you're providing than over, say, a hotspot that might have a limited amount of capacity per month?

Or what are some of the things that actually practically get in the way of...or what's the proper comparison between what you're doing with the self-provisioning versus what you can get from an existing company in the market?

- [Philip] The FCC's Modernization Order that allowed for dark leased fiber was important because it created an opportunity to compare with 20 years. What would the cost of the necessary connectivity be, and how do we best provision that, whether on our own, you know, own fiber, which I, you know, tend to think that's not necessarily great because we're in the business of educating, not in the business of, you know...so, or can we lease it, or do we do lit fiber?

And the interesting thing was, leased fiber and the competitive bidding process showed that dark leased fiber was less expensive long term for the internet capacity we needed over 20 years than lit fiber that we're currently paying. Now, that doesn't make folks happy who have now losing revenue that they had, you know, freely allowed over their older fiber, but that just shows you that some form of additional service or more competitive service, whether it's, you know, public-private partnership or a private entity leasing out or something to incent alternatives.

I think there's...so, that's what we're able to do with self-provisionment. Broadband versus LTE or RF, let me put it that way. The danger is this notion about broadband gets to be super fast, which is important in the household and in your anchor institutions or your community centers, so fast that it diminishes the importance of cellular connectivity as a way to connect to the internet.

At the same time, what we're able to do with that private LTE is a faster and more reliable speeds than what you would have gotten from a hotspot in an area of town, which is a lot of them, that don't have a good cell tower or signal.

- [Christine] I know for the hotspots we provided, we ended up going with unlimited data plans on every single hotspot, which was quite expensive and really exceeded our income that we have from our lease, and fortunately, was subsidized with CARES Act funds. But, that was our way around it, Chris, in terms of the challenge or the limitations that you might have on a data plan, was to go with the unlimited data, was as an excess of $40 a month per device.

- [Philip] Your point's well taken, that it's just not sustainable from a cost standpoint. The challenge, also, and you mentioned it earlier, Christine, is the data. The notion that there are areas of town that are covered by certain cell providers. When we know a cell phone doesn't work really well there, and particularly on the data side, it makes it a real difficult piece to challenge that and say, "Actually, we do need something there."

So, we do need better data maps to make sure we understand what really is necessary. There were pockets that I have come across as I've been...you know, as we were designing where we were going to put the RF first, that are between freeways, that you know you're not going to get a lot of good fiber there from the incumbents. And there are pockets where the cell phones don't work well, and those are the areas that we have to solve for because there are students living there and there are households living there as well.

- [Christopher] Christina, I wanted just wanted to follow up quick before...Lisa might change the direction a little bit. But, you know, you're the chief technical person, right? And so, I feel like there's some people who might think, "Well, yeah, of course you're going to want to just build things. Like, that's the nature of your job." Can you give us a sense of what is your life really like in terms of, like, is this something that, like, you enjoy having to take on?

- [Christina] We have a lot of really smart people that work in our department, that are a lot more technical and smart than I am. I provide the leadership and the vision for our department, and represent technology at the cabinet level. The passion I have around this is really the end goal, and that's our students and our student experience, our students' learning experiences, and our families' experiences.

Because I feel like we have a mission, if not a moral obligation almost, to give them, to Phil's point earlier, the best conditions, the optimal conditions for learning and thriving in this 21st-century digital society. So, for me, it's the passion around the end goal, and not so much, Chris, the building stuff.

Although it's great that we can build stuff, I think you always have to look at what's the most efficient or cost-effective plan for your particular situation. Do you build it yourself, or do you contract it or lease it or, you know? There's no one-size-fits-all for everyone.

Sometimes, it makes sense to build, other times, it makes sense to purchase, I guess, for lack of a better word.

- [Christopher] I will hand it over to Lisa in a second, but I just also want to know. And we had a little bit of, I think, criticism of Comcast earlier, perhaps just an acknowledgement that they can't solve all of this issue. And I think it's important, and I'd love to hear any reflections on that. Like, I don't think there's any one solution that will work for all of your students. There's so many varieties. We need Comcast to do what they can do, and at the same time, we need other opportunities as well.

- [Christine] I'm glad you touched on that, and I'd just like to mention that it was a win-win for us in leasing out our EBS spectrum, because Shentel, which is a major provider, is the one who's actually leasing our EBS spectrum. And they are now providing services back to our community and giving another option for our families.

And so, that's how I see it as a win-win, where it gave us some income, but it's also benefiting our county now and our community because they're providing some point-to-point solutions.

- [Philip] We really need to think of multi-layered approaches because not only, you know, does one-size-fits-all, but things are situated and they need to be sustainable, and I use probably, maybe loosely, but the word ecosystem. If you have a vibrant ecosystem, everyone thrives. And so, to your point, sometimes I tilt with Comcast around, "Hey, guys, change your franchise to make sure there's a minimum for everyone," because before we get to the end of the franchise, so we know we've go the future secured at least at that layer.

But, you're right. We need the for-profits, we need the private and public partnerships. We need the local and the national players. We need to think about these layers and make sure they're all sustainable, and reliable, and performant.

- [Lisa] What can we do to prepare for, or to continue the new ways that we've learned to provide instruction to students and families?

- [Christine] We've recognized that. Fortunately, our superintendent, Dr. Matt Haas, has really been impacted by noticing the students that truly thrived learning in a virtual environment. And so, for that reason, we're opening a virtual school next year as a pilot, with the intent that we will evaluate it as a new program and see how it works with the potential of making it a continuous offering for our students.

We have hired a virtual school principal, and teachers will have to go through the interview process. So, it's not just going to be, "Oh, I want to work virtually." It has to be, "I'm really good at it, and I'm a good teacher in that environment." And so, that's one. The other is, we were 1 to 1 from Grades 3 to 12 with laptops for our students. And we were at a 2 to 1 ratio with iPads for kindergarten, first and second grade, during the pandemic.

We were able to use CARES funds to go 1 to 1 for K-2, and that's the other thing that we are going to continue. And we are going to have to work it into our future budges in terms of sustaining that program, but we will continue now 1 to 1 K-12, so that's great as well.

- [Philip] That's exciting. We're looking at keeping our virtual school moving forward, to that point. There's something called the K-curve response to how we move forward from Ed Elements, and there's some really thoughtful models about all that. But, I want to use a simple analogy. When I was younger and I was visiting my cousins up in Canada, British Columbia, they didn't have fences like we do in California between properties.

So, we were walking towards the grocery store, and all of a sudden...I was behind my cousins, I was a little younger, and all of a sudden, I see a Doberman running towards me. I ran as fast as you can imagine, right? And fortunately, at some point, also I heard the chain l yank and I realized it was on a chain, I was okay. Well, the danger is...you know, and COVID's been like that chain.

We've gone through doing...you know, I'll borrow a sports analogy here. We've gone from playing soccer, to playing indoor soccer, then to all of a sudden, having to shift to basketball, and now we've got some new game we're going to play, like hockey, right? And that's been the shifts from whatever we had to crisis online learning, to online learning, to simultaneous learning.

So, when I got to Fresno Unified seven years ago, we had at our peak, 1.4 gigabytes of traffic going up to the internet. With our personalized learning initiative, before we left and everyone run out the doors and needed VPN connections and all those, right, we were at 19 gigabytes per second. That was in spring of 2020.

When we got back to school, just with the whole shift that happened, we were at 41 gigabytes per second, okay? That gives you a sense of that hockey stick of technology adoption. Now, technology adoption, for its own sake, is not what we want to see. We want to see meaningful, effective use, right? So, I think when we think about that new normal, forget the Doberman, our goal, to Christine's point, is the future readiness of our students.

And so, we're actually looking to envision what that new normal looks like, build on our personalized blended learning initiative, that if you type in Fresno Unified Personalized, you'll find some whitepapers about that. Build on that with professional learning that's effective, experiential, actionable, so teachers can be reinforced in these things, whether they were part of the personalized learning initiative or had their own moves around blended learning.

But, what are those look-fors and guides that we can provide them to say, "Yes, keep running that fast, even though you don't have a Doberman chasing you, right?" We kind of build a community of practice that will sort of catch those really good moves, those exemplary moves, and make sure that they spread. What's happened over the last couple years is we've actually had second-grade teachers learning from high school teachers, and high school teachers saying to a fifth-grade teacher, "I saw your data use of that tool and your quick move to a homogenous grouping, right, after that first instruction," things like that.

Tools for accelerated learning. So, I think we have to envision that new normal, create the right supports for everyone to move, personalize for teachers, just like we do for students. Then, we can put in place learning analytics. Take those new signals that you can get from Teams, Office 365, from Clever, from our app that we're building, and then start putting that together traditional data to see where do we see patterns of effective, you know, signals of effective learning, new ways of learning or new ways of teaching, and continue to reinforce that.

We've got to sort of retool our systems to honor and reinforce the scaling out of innovation that needs to happen so that we don't go back to whatever that normal was before. That's the only way we're going to get students ready for the future we need them to be ready for.

- [Christine] We also have some changes that we've seen in working with families, and we used to approach family technology nights at the building level and thinking it was within the school community and they would host family technology nights. Not consistently across all of our buildings, but during the pandemic, it became obvious that we needed to hold those at the division level, at the school district level.

And so, our department began offering those nights for families, and then it spread into our English language learner department, hosting them in partnership with us, and we would have translators in Zoom for those family nights. And they've become so helpful and powerful for our families, especially our English language learner families, that they're going to continue next year on a monthly basis.

And one of the sessions, our director for elementary education said that she had tears in her eyes because it was being so impactful for parents, the session that she had sat in on. So, that's another change that we're going to make. We're going to be hosting those regularly at the district level, but additionally, we're going to have our techs, we got some tents, and they're going to be going out into the community and providing support onsite more, and just doing a lot more outreach than we ever did before.

And that's a result of the pandemic and the increased needs for support that we had at home with families.

- [Christopher] My child starts kindergarten in the fall, and I'm curious. A family technology night, is that so people have a better sense of how to interact with the resources, the school... What happens, is it generally about that?

- [Christine] It is. It's our learning technology integrators, who are teachers and educators, that host them in conjunction with perhaps a technical staff member and translators. But yeah, we use Seesaw at the elementary level, so one of the sessions might be how you log into SeeSaw, and then what you can see in there.

Just an information session about what the different resources are, or actually learning a skill. So, it varies, and they pick a different topic each time.

- [Christopher] I thought life was going to be easier after pre-K. I'm curious, there was something else which...Philip was talking about re-tooling. And one of the things that I wanted to ask, and Christine, I'll point this to you first, I get the sense from some of the work that we've done in creating that wireless brief, that your acceptable use policy should not be older than many of your teachers that are in the school.

- [Christine] Yes. A lot has changed from the inception of when school districts were required to have an acceptable use policy. So, as more and more resources have become critical, digital resources have become critical for use, it really is time to take a new look at your acceptable use policy.

They were written in the time where the resources, the digital resources, were not necessarily critical for instruction. Much has changed in terms of access, even the fact that students have 1 to 1 devices. The explosion that has happened in the last even 5 years, let alone 10, really require that you take a fresh look at your acceptable use policy.

If it was written in the 1990s or the early 2000s, it's time for a fresh lens.

- [Philip] There's been a lot of focus on privacy, so important. Security. Having all of a sudden, 70,000 computers out in the community outside of our network, it's no longer the firewall that's going to protect them. But, what's often not talked about is safety, student safety. And so, we've put guardrails in place.

We have Gaggle, for example, helping, you know, watch that a student isn't saying something inappropriate to another student. I'll also say well-being and well-being can be promoted and can be safeguarded with Gaggle and other tools like that.

Like, simply, making sure a 12th grader doesn't talk to a 2nd grader unless there's some adult present, if you will, in the digital space. And we've put in place a digital access team that now includes curriculum instruction, school leadership, our special education department, because we want to make sure that anything we now adopt, thinks about universal design, thinks about inclusive accessibility.

It isn't just, is it good curriculum. We've got about, like, 12 criteria and it used to just be one, does it meet, you know, Common Core state standards and is it a good textbook. That's not the case anymore. It's a richer set of criteria and multiple departments having to think about that as we move forward.

- [Christine] We've done the same, Philip, in terms of having a partnership approach to vetting resources. And I think you make a really good point about data privacy and security because a lot of this acceptable use policies did not have a focus on those areas, or digital citizenship, for that matter, which is a bigger need.

As you touched a little bit on student well-being, mental health, that's something else we're changing for next year. We're going to be leveraging some technology tools, actually, some real brief assessments to be assessing students on a regular basis in terms of how they're feeling about things.

- You know, we are using that, in the Microsoft Teams environment, it's called Reflect. You can do a daily check-in on how you're doing, or that a quick check-in on how is that learning experience. Well, there's just a lot of affordances and opportunities to build on what we knew we needed to do, but some things have loosened up.

For example, we didn't have our state test this year and didn't have it last year, so all of a sudden, two weeks or other ways of thinking have been freed up and we know social emotional wellness is more important than ever before. It's always been important, we just didn't pay as much attention. You know, we need to get rid of the stigma. We need to find ways that we can build our social emotional awareness and executive functioning and compassion or empathy for others as well.

- [Lisa] Are you guys ready for the fall?

- [Philip] We're busy getting ready further, and that includes making sure we're all into and leaning towards that new normal. And in our case, we weren't as forward-thinking as Christine's district. We are finishing our LTE as we speak...

- [Christopher] I was going to say, a few weeks ago, you told us you'd be done today, as we're recording.

- [Philip] Exactly. So, we're mostly done. Supply chain challenges, so we're going to turn our work towards socializing that, figuring out which customer premise equipment, which hotspots work better and, you know, which kind of housing units. And then, figure out, you know, making sure what we call our flats, our family support centers, that they know how to respond.

You know, if you're here, you should use the private LTE, but if you're here, use a T-Mobile. And if you're here...you know, that kind of support. So, we have to put those systems in place. But, we're certainly looking forward to a new normal and doing everything we can to support families, students, and teachers in that new normal.

- [Christine] Absolutely. We've been doing a lot of advanced planning. We're going to be really busy with projects this summer, but we really can't wait to have full school buildings come August.

- [Christopher] Excellent. I'd like to thank Dr. Phil Neufeld, the executive officer at Fresno Unified School District in the Department of Information Technology, and Dr. Christine Diggs, the chief technology officer at Albemarle County Public School District. Thank you both for your time today.

- [Philip] Thank you.

- [Christine] Thank you.

- [Christopher] And thank you, Lisa.

- [Thanks.

- It was a wonderful series to do with you.

- It was a great series. Thanks so much for inviting me along. ♪ [music] ♪