Learning remotely in the age of COVID-19:
Lessons from evidence and concerns for equity

Webinar Transcript

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[Brian Gill]: Thanks very much, Brian. And thanks to all of you for joining us today for this webinar on Learning Remotely in the Age of COVID-19. This webinar is sponsored by the U.S. Department of the Education Mid-Atlantic Regional Educational Laboratory. My name is Brian Gill. I'm the director of REL Mid-Atlantic, which is operated by Mathematica.

As we're all deeply aware, COVID-19 has forced the closure of school buildings across the country, but children still need to learn of course, and educators are working overtime to find ways to make sure that happens. Schools and districts have never faced anything like this before though, and many of them are struggling to identify and implement effective approaches to remote learning. Tackling this issue head on is especially important, given that students who struggle with in-person instruction are even more likely to struggle with an online format.

During today's webinar, we'll talk about an exploratory literature scan aiming to connect educators with research and discuss related issues about equity for all students. Now, it's important to mention that this webinar builds on a workshop that was hosted last week by our colleagues at the Midwest Regional Educational Laboratory. That webinar focused on research-based resources and considerations for virtual learning. Both of these events are part of a larger series of webinars, blog posts, and other products for educators, for parents, for administrators that collectively represent, really, an unprecedented collaborative effort across all ten regional educational laboratories spanning the country. And you can find a link that lists all of those upcoming products and activities in that resource list widget that Brian Willis just mentioned.

For today's webinar we've got three goals. First, we're aiming to connect with what research says and what it doesn't say about practices and approaches that support remote learning. Second, we'll present a framework to help inform decision-making for educators as they respond to the need to implement remote learning systems. And third, we'll highlight some approaches to addressing equity concerns that are magnified by the closures of school buildings.

As the session proceeds, feel free to share your question in the Q&A box that Brian mentioned before, and at the end of the session, we should have plenty of time for our team of presenters to respond to a number of questions. We'll get to as many as we can before our time is up. So, with that, I want to briefly introduce today's presenters. We have three esteemed presenters today: Heather Bennett is director of School Equity Services for the Pennsylvania School Boards Association. Felicia Herwitz and Steve Malick are both staff on REL Mid-Atlantic and researchers at Mathematica. And now I will hand the presentation over to Steve to get us started.

[Steven Malick]: Thanks, Brian. I'd like to overview the plan for today. So, first, we'd like to take a few moments to get to know all of you and who is joining us today, then we'll provide some context for how districts in our region are responding to the sudden school closures and describe strategies that districts across the country are influencing right now. We'll then share the results of our exploratory literature review and highlight some of the most promising practices educators can use to meet the needs of their students during current school closures. Finally, we'll explore strategies from equity for students in the age of remote learning.

But we'd like to get to know who you are, so we'd like to learn who is joining us today. On your screen, you should see a widget pop up or a little poll, and we're asking you to select the option that best describes your role at your organization. Go ahead and take about 30 seconds, and we'll share out the results of that.

All right, let's see who is joining us today. So, it looks like we have folks from the whole gamut of different roles. So, we have teachers here. About ten percent of us are teachers. About five percent of us are school-based coaches, with another four percent being school-based administrators. We have district administrators and state administrators, technical assistance providers, and a whole bunch of researchers and policy analysts. Thank you all for joining us today.

So, before we get too far, we want to make sure that we're on the same page about some of the terms that we're going to be using during today's webinar. We use the term "remote learning" to talk about all the education that is happening outside the classroom. This remote learning includes everything from online instruction to paper and pencil learning with packets. In this way, we can think of remote learning and distance learning as synonymous.

One aspect of this work is synchronicity, that is whether the learning is synchronous and teachers and students are interacting in real time at the same time, or whether learning is asynchronous and teachers and students are completing their academic work -- excuse me -- that students are completing their academic work without the direct interaction of their teacher in real time. In our current context, we can think of the educational packets that many students are completing as a form of asynchronous remote learning. We also use the term "virtual learning" to describe all learning that relies on some form of technology, such as the Chrome book, a laptop, or a tablet. Now I'm going to hand things off to Felicia to discuss the current context of school closures.

[Felicia Hurwitz]: Thanks, Steve. So, first, we can't proceed further without acknowledging the hard work that educators in our region and across the nation are doing in a time of crisis. Our goal is to provide promising practices informed by evidence information to help guide educators, recognizing that we are living under what can feel like impossible circumstances. Before we dive into our findings, we just wanted to highlight some examples of what schools are doing within the mid-Atlantic region and beyond.

So, there are some various approaches I just want to highlight that some districts are taking in the mid-Atlantic region, and this slide depicts just a few examples. First, districts are providing a variety of resources for remote learning, including instructional packets, online, and via paper, support for office hours, and

access to devices. Schools are also thinking about equity concerns, including providing special guidance for students with disabilities and resources to support special education teachers with remote learning.

You will notice that other bit of equity concerns aren't listed here. For example, supporting students experiencing homelessness. If a population of students is not listed on this table, it does not necessarily mean that the district isn't thinking about or supporting this group's needs. We were just limited by the information we could find. And finally, we could see that schools in our region are working hard to provide support for physical and social/emotional wellness, including instructional packets and other resources for families together.

So, in the mid-Atlantic region and across the country, we are seeing different models for instruction being implemented, with procedures and plans rapidly evolving. This shows a few of the various approaches we are seeing. In Washington State, Northshore School District is trying to keep the school day as similar as the traditional school day as possible, including using a virtual classroom model to keep students on track, as well as time for teachers to engage in professional development activities.

In New York City, Success Academy Charter School includes virtual instruction with a master teacher, with support from other teachers checking work and providing feedback daily. And in Chicago, Chicago Public Schools moved from providing instructional materials to merging digital and non-digital learning platforms with support from teachers via office hours as an example. According to their website, students have digital learning options and dedicated office hours where students and families can receive support from teachers through video conferencing, phone, or e-mail.

It's important to note that, as best as we can tell from reporting and other research, approaches like Chicago are far more typical than Northshore or Success Academy's approaches. There are very few schools and districts that are yet doing something as ambitious as either of those approaches. Many districts are starting by providing supplemental resources and trying to figure out how to get beyond while they are ensuring equity.

The Center for Reinventing Public Education and the American [inaudible] Institute have been systematically examining districts' plans and describing trends. I also want to note that teachers are using a variety of mediums to communicate with students. A recent survey of educators published by Ed Weekly found that 86 percent of educators used e-mail to communicate with their students. They noted that a majority also communicated by posting written messages online or video conferencing. Also, 40 percent of teachers overall have used one-to-one phone calls, while 77 percent of special education teachers had one-to-one phone calls with their students. And so now I'm going to turn it back over to Steve to start diving into some promising practices. Steve.

[Steven Malick]: Thanks, Felicia. So, school districts and states deserve a great amount of credit for their hard work in responding to the issues that have arisen as a result of the pandemic. However, as we've talked with stakeholders in the region and beyond, we've heard loud and clear their concerns. Many have shared with us that while they're trying to make the best of the situation, they're spending a lot of time responding to proverbial fires; that is, creating quick solutions to immediate problems.

As the reality of prolonged school closures with the expectation of continued educational support of students really begins to set in, educators have shared a desire for additional guidance on what to do, what practices to employ, and what research says about remote learning so they can ground their decision-making and approaches most likely to support their students. The rest of the session digs into this concern. First, by sharing what we found during our exploratory scan of the literature on remote learning, and second, by diving into the particular challenges faced by students most historically underserved by the education system.

We also want to acknowledge that we're sharing our findings here, but we recognize there are limitations on what educators can do. The starting point of any conversation for schools, districts, and states is to ask, "What can we possibly do?" For example, we know that many teachers themselves are providing remote

instruction while watching their own children. There's only so much they can do in that particular situation. But we wanted to use the findings here to illustrate what we know and explore the possibilities of that.

So, as I said earlier, we're presenting on the findings of what was the first step of a larger systematic literature search. And we wanted to share a little bit about how we conducted the search. The first thing we did was to set out a search to the literature looking at studies, specifically literature reviews or rigorous studies involving a comparison group written within the last ten years that grappled with the effectiveness of remote learning and remote learning practices in K-12 settings. We were fairly generous in defining remote learning so that it can include any sort of academic learning that could conceivably happen outside of the classroom, whether mediated through technological means or not. Given that we only explored literature for the last ten year however, nearly everything we found dealt with some form of technology mediated strategy.

Once we identified eligible studies, we documented what was studied and what the impact was. In total, we identified about a hundred eligible studies involving a comparison group, and nine literature reviews or meta analyses. But here's the things that got a little bit different for us than a traditional scan of the literature.

Before COVID-19, if we asked the question of how effective remote learning is, we'd probably want to compare remote learning to a traditional classroom. But as you know, the comparison right now is not a traditional classroom with face-to-face instruction. Instead, it's kids at home not in a traditional classroom. And we didn't find any studies about teaching remotely during a pandemic.

Today, schools and districts don't need to know whether a remote learning strategy is better than classroom instruction. They need to know which remote learning strategies can maximize learning and minimize harm when there is no classroom alternative, so we reviewed the literature with this in mind.

So, here's a little bit more about how we thought about identifying the promising strategies. We considered the following: If a strategy works better than face-to-face instruction, we consider that a win for the strategy. In other words, if it had positive impacts compared to traditional face-to-face instruction, we considered that a win. If a strategy works just as well as face-to-face instruction, meaning that it was no different than traditional classroom instruction, we consider that a win for the strategy. In fact, if we can find strategies that serve students remotely as effectively as we would have served them in the classroom, we'd consider that a pretty good success. And for strategies that work worse than face-to-face instruction, we can try to identify key features of the strategies that distinguish them from more effective strategies. Those might help us identify things to avoid in our strategies.

So, let's turn to what we found. Again, we think there's something to be learned from all the studies, even those with negative impacts, and here, we summarize the findings that had learnings that had impacts that were negative for students compared to traditional instruction. Of all the studies, the only studies that had negative impacts were of those studying schools or courses that were a hundred percent online. While there are occasionally exceptions to this, these studies typically found that students in online schools were completing online coursework underperformed compared to those attending physical schools or in-person courses.

This might be disconcerting at first, and so when we examined some of these studies a bit more closely, the authors repeatedly discussed the idea of synchronicity, again, the idea of students completing course work at the same time that the content is being delivered or receiving real-time support and feedback. The authors of these studies suggested that this might be an important reason why students, on average, were less successful in these settings compared to their peers who attended in person.

So, let's pivot from those studies with negative impacts and now look at what promising strategies we identified from studies that had positive or equal findings. Across the studies we examined, many involved a study of web-based applications. One involved using phones. Some looked at the use of technological devices without internet access. None have examined a model that we've seen emerge where schools sent home packets of work. We did want to note that many of these studies occurred within the walls of the classroom. As I mentioned earlier, we were generous in our definition of remote learning. If a program or

strategy could be used to support remote instruction, we included it regardless of whether the study was conducted in a school or not. But the headline here should be encouraging, especially given the alternative for students.

While more rigorous research is needed to definitively say this, here is what we found out about these strategies. First, we found the positive and neutral finding studies involved feedback, tutoring, or support strategies. Over 40 percent of all eligible studies grappled with various ways to provide additional support to students. One meta-analysis dedicated time to looking at effective practices for communicating with students virtually. Several studies explored so-called intelligent tutoring systems that tailored feedback or scaffolded instruction to students based on how they were responding to questions. Some involved collaboration, and one even fostered conflict; that is, argumentative discourse to support persuasive writing.

Next, some involved project-based learning. About ten percent of studies involved project-based learning are using tools to explore content. Instruction involving authentic projects had positive impacts. One study found a particularly positive impact for English language learners in their abilities to explain scientific content. Some involved games or virtual simulations. Several studies found positive impacts on students engaging learning through games or virtual simulations. Gaming and virtual simulations varied in complexity, but all were remediated through a digital device.

And last, they plan for more than just content delivery. Over one-third of the studies involved an application or computer program delivered virtually or online. Of those that did not involve feedback, tutoring, or support services to students, these studies often involved instruction that was somewhat interactive, provided additional resources to students, or encouraged student choice. Two studies that used technological devices as a medium to replace traditional content had no impacts; for example, replacing writing an essay with writing a blog.

So, before moving on, we just want to acknowledge two things: these are the strategies that have emerged from an initial analysis of preliminary literature search and more rigorous research is definitely needed on these strategies. But, next, we also wanted to recognize that we realize that these strategies don't address all of your questions about what research says. For example, the best ways to communicate or support families, best ways to provide development strategies for teachers, what exactly students should be focused on during these difficult times. We don't think you should lose sight of these questions, and at the end of this session, we'll conduct a stakeholder feedback survey, and we'd love to capture other directions that we could explore. But for now, Felicia is going to walk us through what we can learn from these studies.

[Felicia Hurtwitz]: Thanks. So, as you can see, under pre-COVID-19 circumstances, the studies we reviewed were all over the place. But educators have to start making decisions based on what's available right now. While more good research is needed, we thought about the unique characteristics of these strategies and extrapolated what source of insights that schools, districts, and states consider.

We made this table to highlight what we could learn from all of our studies, whether they had negative, positive or neutral findings. First, with respect to online learning and courses, while the impacts were not positive, these findings illuminate the need to foster synchronous time with structure. Then, with feedback tutoring and support, we were initially curious about the amount of studies involving virtual feedback supports, but it reiterates education theory that learning happens through human interaction. These interactions build trust and create opportunities for learners to be pushed to think about new ideas in new and different ways.

For project-based learning, at the core of project-based learning is the desire to solve problems, which is similar to a human sender design approach. Humans are problem solvers and projects connect students' desires to fix something, especially when the problems are connected to their lived experiences. When it comes to gaming or virtual simulations, we know that while schools are unlikely to be able to throw together virtual simulation, the research on gaming points to behavioral science. Behavioral science anticipates the friction points that may deter desirable behavior.

Have you ever gotten a job and were automatically enrolled into a retirement plan? That's behavioral science. We all know that people want to save for retirement but sometimes don't get around to it. Similarly, game design uses behavioral science to engage people into an activity, and just when the game is about to get boring, something happens to reengage the gamer to participate longer. This approach can be used to help think about how to engage students and their learning and keep them engaged, plus, games are just plain fun.

And plan beyond content delivery. Technology for technology's sake probably won't get you too far. But there might be potential when the educator considers how the technology can augment the learners' experience through sharing additional useful resources or providing additional options for exploring the content. The key here is that technology can supplement instruction but not replace it.

So, before we move on, we want to acknowledge that during a crisis creating safe, nurturing, and authentic learning conditions is even more challenging than ever, and we cannot expect people to implement promising practices like we might have thought before this crisis. Making these sources of changes requires changes at all levels and educators need support and training to do all of this. Some schools and districts will be able to pivot more easily than others, and implementation of promising strategies will be even at best.

So, implementing strategies to their full extent may not be feasible for your [inaudible] right now. However, we do want to invite you to think about what approaches you are using now, the extent they reflect these promising practices, and how you might be able to implement other potential promising practices to attack this unprecedented situation. School districts and states are working to close the digital divide on the fly, but the reality that for many students, virtual learning may not be feasible right now. Our next speaker will talk about equity issues.

We hypothesize different ways that educators could apply these promising practices into insights to support their students. For example, with synchronicity, thinking about teachers, administrators, and other school staff might connect with students in real time, such as through phone calls or holding virtual office hours. Thinking about how students receive feedback and connect with peers during learning, through phone calls or sharing pictures of their work, perhaps sharing feedback in the mail or by picking up feedback from the same place that they pick up meals.

Think of what problems students are grappling with and how content can be taught to help explore those problems to come up with their own solutions, and finally, trying to think ahead about where students will lose interest or become disconnected. How can that be avoided? Could we implement competitions or other types of games? And what additional resources can be provided for students and families to help and support learning? And how can we provide clear directions for what to do and how to do it?

So, the last thing we'll say is this, if this conversation about research is making you feel like you want to know more, well, so do we. In many ways how we do school have just fundamentally changed and we just don't have the exact confidence to tell you exactly what to do. But luckily you have the power in your hands to do something about that. So, here, we're going to highlight two resources that are helpful in doing this. The first is the Evidence to Insights, or e2i, Coach. The e2i Coach is a free online platform to help you generate evidence about what's working in your unique context. This is incredibly important because if students are working in your school or district, this applies rigorous methods to measure the impact. And if it's working, it creates an opportunity to share with others grappling with your situations exactly.

The e2i Coach will be discussed in a webinar later this month. The e2i Coach is a free product developed and maintained by Mathematica, with initial funding from the U.S. Department of Education Office of Ed, and recently upgraded with support from the Chan Zuckerberg Initiative. And as I mentioned, the REL will be hosting a webinar on e2i Coach to refine your remote learning strategies on April 24th.

The second is what to do with what you're learning from the data you're collecting about the various approaches that you're using. Using an evidence informed continuous improvement cycle like the Learn, Innovate, Improve or LI squared. It helps you make sense what you're learning and iteratively improves on

those efforts in ways based on research. This is all to say we have an opportunity to turn a situation that, by all accounts, is not great, and use it to help change the reality of education for millions of students across the system.

So, in a few minutes, we're going to turn it over to Heather Bennett for her discussion on equity concerns, but we thought we'd take a few minutes to see if there are any questions that have come in so far. Steve?

[Steven Malick]: Thanks, Felicia. Yeah, the first question that's popped up is a question coming from, I assume, either a school administrator or a teacher. They're asking, "How might we, as a school administrator or a teacher, support parents who are helping children learn from home? What about parents for whom school was difficult or resources are limited?"

[Felicia Hurwtiz]: Yeah, that's a great question. So, it's important to note that we did a scan on best practices on parent engagement as part of this work, especially with limited access to resources. But the REL's other groups are starting to work on a series of parent tips, documents that are derived from practice guides produced by the U.S. Department of Education's What Works Clearinghouse. They're going to be related to specific topics, like early reading and elementary math, and they're going to be coming out on REL websites over the next few weeks.

I think I have a human response to this question as well. Some of the ideas that you might consider might be talking with families, and when doing so, providing clear information and instructions, when possible, what kind of language we're using when we're talking to families, thinking about what the goals are, where parents can get more help if they need it, and, when possible, providing parents with an [inaudible] so they can be the ones to provide students with [inaudible].

And some other ideas to consider might be holding office hours for parents. And probably the most important thing, though, is setting realistic expectations for what can be accomplished, given the world we we're living in right now.

[Steven Malick]: Thanks. Yeah, we had a question come through. It says, "What would you say should be an immediate next step for a principal or district to implement these practices?" I think that's a good question, because, you know, we often are facing a situation where we learn about something and then we're left with the question about what do. And I think this exploratory literature scan is kind of pointing to a few things to consider for principals in districts. I think the first is considering ways to support teachers and their ability to connect with students in real time, such as encouraging them to hold virtual office hours or calling students and their families. And maybe understanding the extent to which teachers might face barriers in being able to do this as well, and helping create solutions and ways for them to connect with their students.

I would also include maybe supporting and encouraging teachers to provide direct feedback to students and consider creative ways for connecting peers and learning, such as through group e-mail chains or, you know, group texts or things like that. I also think there's an opportunity to work with teachers to share ideas, best practices that they have encountered in keeping learning exciting, kind of speaking to the gaming literature of what were learning from that, of how to keep activities motivating for when students might be completing them solo. And, you know, one idea might be creating competitions where you have leaderboards, where your students are kind of earning points along the way and getting excited that way.

I'm a former middle school math teacher, and I've never had a competition that my kids didn't get really excited about. And then, of course, critically, and Felicia kind of already talked about this a bit earlier, but working with teachers to create resources for students and families to support their learning. I recently was watching my nephews during the remote learning day, and as a former teacher, former teacher coach, and I was reading the directions, and I was a bit confused about what my nephews needed to do. So if I'm confused, you know, I can only imagine. So, thinking about how to provide clear directions to families about ways they can best support their students and connecting them with resources that could help them help their students make the most of this situation.

[Felicia Hutwitz]: Yeah, that's great. It looks like we have another question about how federal and state agencies can support districts during this COVID-19 crisis. I'll just say that we know everyone has been responding to this in real time and putting a lot of time and energy to making a difference for students and their families and their larger communities. So, I think it's probably about continuing on with those experts, you know, identifying policies that are helping and providing specific guidance, especially for populations of students that are not historically well served. In the spirit of collaboration and not evaluation, thinking about how to push districts to think about continuous improvement. For example, finding ways that districts can track progress and working across other districts and schools.

[Steven Malick]: Great. And we're going to pass it off to Heather in just a second, but someone just asked us for a reminder of where they can get some of the resources we referenced, and, actually, a list of the references that we used as part of the literature search. And we just wanted to point out that you can get access to a full list of those citations using the Resource List widget, which you can find-- it's got a little green file icon at the bottom of your screen. And we'll also be posting that list with a recording of this webcast.

With that being said, we are excited to hand things over to Dr. Heather Bennett of the Pennsylvania School Boards Association. Heather, it's all you.

[Heather Bennett]: Hello. How are you? It's really great to be here, and I'm excited to discuss and explore strategies to promote educational equities and remote learning. And so, I start off by trying to explain the problem here. We've already had a problem with digital inequity before the pandemic. This issue is not new, and the National Digital Inclusion Alliance defined digital equity as "equal access to digital tools, resources, and services to increase digital knowledge and skills."

Access to digital resources, unfortunately, have not been equally districted. High-poverty schools, rural schools, low income, English learner students, and students with disabilities and their families in Pennsylvania, and across the nation, are disproportionately harmed by the lack of access to digital schools and resources. Students and parents who do not have access to digital schools and resources are typically at a disadvantage in their academic progress, making it difficult for students to complete homework assignments, projects, research assignments, and, of course, it impedes parental communication and engagement with the school.

This equity gap can also be compounded due to the cost, lack of infrastructure, and discrimination in the investment distribution of certain communities and populations. So, this is the issue before the pandemic. What we're seeing during this pandemic is that COVID-19 has exposed and exasperated, as well as compounded, the digital equity problem and has forced districts to react quickly to provide devices, really discuss internet access and instruction so that children will not be at a further disadvantage.

Unfortunately, the students that are experiencing the most hardship right now in this light are the same students in schools and communities that desperately needed these resources before the pandemic. The opportunity between districts, schools and students, unfortunately, may widen during and after this pandemic. And so, I really wanted to count this as a major equity issue here, because that's exactly what it is. So, today, we want to talk and discuss three main digital equity learning concern: access to digital devices, access to connectivity, which is like internet, high-speed broadband internet, and then also access to instruction.

So, let's start off with access to hardware or devices. When we're talking about digital learning hardware, we're typically talk about computers, laptops, desktops, and notebooks, and, of course, mobile devices, which is smartphones and tablets. But here's the problem-- typically what we see in research is that high-poverty schools, and also economically disadvantaged students, have limited access to these devices. Even if students have access to a device at home, the device may not be conducive to complete school assignments given to them by their teacher or school. There is a difference between writing a research paper on a smartphone or conducting a research assignment on a smartphone than on a laptop or notebook. We have to understand, when we think about devices, they differ as well in access and usability.

And, of course, according to the 2016 U.S. census, smartphone-only households tended to be low income black and Latin families and students.

So, how has COVID-19 exasperated this issue? I said that there are three major issues to discuss here. Providing devices to every student is extremely -- a huge budgetary concern for district administrators and school board directors. For the most part, devices are expensive, and districts, at this point, are trying to obtain the resources to purchase these devices for their students. For districts, some districts waited until the pandemic provided devices for every student, while some districts had already had a one-to-one plan prior to the pandemic, so we're seeing an inequity gap right there in that.

Also, questions about the fact that devices were typically -- if they did have devices, they were typically provided to high school, and maybe middle school students, but now districts are thinking about how they can provide devices to fit the needs of their elementary school students. Another issue in this framing is devices in learning platforms are not compatible or easy to use.

So, the second issue I wanted to talk about is providing students with a device safely. This causes to affect this idea of sanitation. One Pennsylvania superintendent indicated that providing devices for all her students would not be the problem, but distribution would be. So, there's issues of sanitation, in terms of sanitation and concerns regarding that, how are you going to provide the devices to the students who need it the most in a safe manner when we're in this process of social distances?

Also, the third issue in this piece is learning how to use the device. Getting a device is one step, but teachers, parents, and students also have to be aware of the device features and learn how to utilize that device for it to be effective. So how do we deal with that? What are ways in which to mitigate this inequity we see in terms of accessing the devices? Well, first, it's important to provide devices to students with the most need through mail or at specified distribution sites. And we have to take into consideration the safety of staff and families when distributing these devices.

We know that some school districts have decided to mail their devices, utilizing the mail to the most needy families. So, for example, multilingual learners, students with disabilities, or students living in public housing. Some districts have decided to utilize -- they're already talking of providing meals for students as a distribution opportunity as well. Again, it's extremely important that we take these into consideration the safety of the staff and families and provide them with protection materials so that the students and the family, as well as families are safe in place if they are providing a device in person.

Another way to mitigate the inequity is to consider alternate types of devices or additional software needed by students with disabilities when providing certain devices. Students with disabilities may require different devices, so please take into consideration accessibility based upon who your student is and what they need.

It's important to test the learning platform on the device and survey learners to assess compatibility and usability. This is kind of relates to the second point. But, remember that applications work differently, even on our iPhones or androids, right? Some people are iPhone users, some people are android users, and the usability is different depending on that. Let's think about that in the same way with our learning devices. Applications, learning platforms will be utilized differently depending on the device, so it's important that we really survey students and survey learners to see what's easy for them and what is accessible to them.

Partner with technology companies to provide devices. That's important. It's important to seek out grant funding. Potentially, Department of Education has this Emergency Continuity of Education Equity grant. It is intended to provide additional financial support to districts and schools with high percentage of students who need it the most. So, this grant will go to purchasing hardware, software, technology infrastructure, assistive technology for students with disabilities, supports for English learners, special development for personnel students and caregivers, and much more.

And the last point that I wanted to get at in regards to access to devices is that we need to provide how-to resources on the website. And if our students and our families don't have access or don't have adequate

internet access, it's important that we utilize the other technologies that we have in our availability, and that's our phones. And so, consider using an automatic data call system to provide a phone number to provide technical assistance when needed. So, these are just some of the ways in which we can mitigate this inequity that we for someone accessing this device during this pandemic.

So, we're going to move on to the second issue, equity issue that I would like to address, and that is access to connectivity. Let's start off with the problem. Access to hardware means absolutely [inaudible], if the school and the student cannot access the same resources in connectivity. There is an extreme digital gap, identified by class, race, and often geographic location, when it comes to internet access. Without access to connectivity, students cannot access the same resources and participate in the same opportunities as fully as those students in schools and households with adequate connectivity with internet access.

So, for an example, according to the 2016 FCC report, it indicated that in Pennsylvania there are about 800,000 Pennsylvanians, or six percent of the population, who lack robust reliable types of internet, and the majority of them are coming out of rural districts in those communities. But, also, 31 percent of that number are also coming from urban areas as well.

So, how is COVID-19 exacerbating this problem? So, due to the COVID-19 and the spread of virus and the need to social distance, schools have shuttered across the country and in Pennsylvania, yet, the requirement to implement instruction is still important for schools to push forward. And the only way to conduct instruction is through some form of digital learning opportunities. However, the cost of internet service to households can be problematic. Families may not have the money to be able to afford high-speed broadband internet. And even those these numbers are going down in terms of the pricing, low-income families are still less likely to have access to high-speed internet.

So, again, according to research, the U.S. Census indicated that only 21 percent of low-income households had connectivity, compared to 80 percent households of $150,000 or more. The cost of internet certainly deters low-income families to access reliable broadband internet. And if we think about this from a racial line, nationally, 56 percent of white students, 53 percent of Asian, and 54 percent of mixed students have Chrome internet access. This is a higher percentage compared to 53 percent of blacks and 50 percent of black mixed, and 49 percent of American Indian students in the United States.

So, I would also like to iterate that even if there are services that provide broad plans, is this information getting to the communities that need it the most? So, even if they are able to afford, or if the numbers are low, that they can afford broadband internet services, you have to make sure that this information is being communicated to families.

So, another element that I wanted to talk about is lack of internet infrastructure for cost effective high-speed connectivity in remote locations, and I'm pretty much talking about rural areas and communities and school districts. Rural areas often lack the fiber infrastructure to provide cost effective high-speed connectivity, and so even if the schools themselves have the connectivity ability, what we notice is that students and teachers who live farther from the school may not have the same internet speed or connection.

So, what we've seen in Pennsylvania, and probably in most parts of the mid-Atlantic region and across the country, is that in rural districts -- in one of our school districts, 50 percent of families did not have access to internet, high-speed broadband internet, which can cause a lot of stresses on families, in fact, both emotionally and economically. So, it's really important that we recognize that it's harder for parents and it's harder for even teachers to administer the lessons, or even provide for their own kids if they are further away or they don't have access to high-speed internet capabilities.

I also wanted to mention here, because I have the time to, is intersectionality is important here. We have a lot of poor children living in rural spaces. So, let's even talk about the compoundedness of the problem of not even have access to broad-speed internet, at the same time also maybe just not being reported. So, we have to think about all these things in practice, and so let's talk about ways to mitigate this problem.

So, first, we suggest that maybe it's important to partner with internet providers, so free Wi-Fi for the most economically disadvantaged family, and, of course, lifting caps on data usage. This is important. Provide hot spots for families and staff. And we suggest that you check your E-rate state site for a list of resources and free community hotspots. Your E-rate state website should provide you with a lot of resources to help and assess what areas that your families and your communities and your students can access. It's important to provide a map of community hotspots and Wi-Fi locations on your website, but also, of course, if students don't have high-speed internet capabilities, it's important also to think about how to get this through phone calls or the mail.

Another thing is utilizing the parking lots. In a lot of these areas, such as restaurants, libraries, and even schools, these are areas in which students can have access to Wi-Fi internet, and it's also important to survey and assess transportation barriers for students to assess these hotspots. How are kids actually getting to these hotspots, right? In rural spaces, some of them have, you know, fashioned some buses to have Wi-Fi or hotspots, and there are school buses going around to these neighborhoods so kids can have access to some type of Wi-Fi internet. So, it's important to provide a map, but also be creative in where and what location we're providing these hotspots in.

Of course, use public television stations and radio to promote instructions. If you go on the website on the public radio or public television stations, you'll notice that they'll have a curriculum, they'll have a lot of resources, and they'll also indicate the subject matter of those too. It's important, also, to modify online instruction for students utilizing paper packets. So, for students who legit do not have access to connectivity, it's important to utilize a mixture of digital learning but also paper packets so they're to be a part of the conversation, to be able to get instruction in some form or fashion.

I will also say that read blogs by rural teachers I think are extremely important, because they know how to strategize ways to deal with the internet connectivity issue better than anyone. I read a wonderful blog recently by a rural teacher in Pennsylvania who has amazing suggestions about how to mitigate the impacts of lack of internet connective for herself and her family, and for her students, and I think that's really helpful.

So, let's move on to the last issue and topic that we're going to focus on today, and that's going to talk about access to instruction. So, what is the problem, okay? Integrating technology into the class and desire to utilize technology as an integral teaching tool in classes has definitely also faced a digital divide between disparate schools, teachers, and students. The use of technology in classrooms has definitely changed the judicial model of teaching from instruction to facilitation, right? And so there are two major issues I really wanted to talk to you about when it comes to access and instructions, and that first issue is access to training.

Teachers and parents definitely need professional development on how to utilize these devices, as well as how to engage in instruction utilizing a digital learning platform. This is extremely important, and especially for teachers who are not used to moving from a traditional model, from instruction to facilitation. With this format, students are now going to be focused facilitators with them. And then in the midst of COVID-19 crisis, parents are the ones having to really, for the most part, help their students, and also instruct their students as well, and so it's important that both teachers and parents are well versed in how to utilize these digital learning platforms, as well as instructional measures.

The next is choice of instruction, providing instruction that meets the needs of diverse learners. Remember, equity is providing students what they need to be successful, as well as in the format that they need, as well, so it's important that instruction of a digital learning platform is really reflective of our diverse learner.

So, moving forward, we're going to talk about some key questions that I feel are really important in this conversation in terms of access to training, and I feel like these are questions to ask yourself, I know districts, as you're developing a plan for learning in your district. So, first is how should districts implement training for staff, parents and caregivers regarding the importance of digital learning, the use of digital devices, digital learning platforms, and the video conferencing applications?

The hard part for a lot of teachers is integrating the lesson that you would normally do in your classroom to a virtual education format, and that requires training, also, understanding how to integration social emotional learning and culturally responsive practices also into the curriculum.

The second question is, what supports exist for teachers, staff, parents, and caregivers for digital learning, which requires analyzing supports and resources and providing that information will go a long way. So, what are the supports that you already have in place, and, also, what supports have you grown to learn while you're moving in this direction? That information should definitely be available for teachers and parents. And three, what biases and fears do teachers, staff, parents, and caregivers have towards digital learning; okay?

So, in terms of choice of instruction, let's talk about some questions to ask yourself. The first and probably one of the most important questions is, "Is the instruction tailored to meet the needs of vulnerable populations?" We're talking about economically disadvantaged students. We're talking about students in special education, English learner students, and homeless students. We recognize that these populations, these student populations require additional supports but also supports tailored to meet their specific needs, and so it's important that we're thinking about, in terms of instruction, how are we reaching these students.

Second, "Is the instruction tailored to meet social-emotional learning and focusing on mental health needs?" I'm going to go in a little bit on this, but it's important that we recognize how important mental health is in this timeframe prior to the pandemic, but also during the pandemic as well. The third question is the instruction, hopefully, responsive; right? fourth is, "How will you promote academic rigor?" And so, these are the questions that we felt it would be really important to discuss as you think about ways to mitigate this specific equity issue.

So, let's start off with the first point, which is providing training for teachers, parents, and caregivers. It doesn't matter -- it does matter. I'm not going to say it doesn't matter. It matters what you utilize in the format in the meetings that you use. But you can use multiple different formats to move this forward, utilizing webinars, videos, guides. But it's important that you not only educate your teachers but also your parents and caregivers on how to utilize these devices effectively. So, utilize your website as a place for some of these spaces, some of these trainings, but also, with your own teachers, making sure you're spending time and you have the time set out for full staff professional development on utilizing these devices and learning platforms, and also learning instruction.

Two, focus students in instruction. It's so important that we're censoring students in this work. And so that requires us to really think about content that reflects experiencing identities of students and families. When we're choosing videos, when we're choosing text, that we're reflective of the different cultural identities of our students, and also making sure that we're recognizing that they feel that they belong within the instruction as well. So, let's make sure that we are really focusing and censoring our identities and cultural spaces and frameworks into our curriculum.

Allow students to choose topics and engage students' voices in decision-making. This is also extremely important; that we're making sure that our kids, again, are censored here, and that because of this framing, we have the opportunity to be very flexible in terms of teacher and administrative focused instruction. So, keep that in mind in the place. So, in terms of, like, plans for the future, it's also important to engage students in that as well, making sure that students are a part of these conversations. Incorporate group activities; that is, monitor breakout rooms on learning platforms. We have communal learners, and so it's important that we're utilizing, in terms of teaching practices that we're also incorporated students into groups and creating opportunities for them to game play games, opportunities for them to work together as a team. But also, from a social and emotional learning standpoint as well, it's important that students are interacting with each other.

Engage in project-based learning. And one district in Pennsylvania, a district offered a project-based instructional menu for students, where they had to pick two options out of that menu, and this is an opportunity for students to, A, choose their topics, but also engage more effectively with the material itself, and also being able to do experiential learning as well. And some of these projects can be done without

internet. And so, these are examples of how to utilize and mitigate the impacts of all these inequities we are seeing in our spaces.

Check in with students consistently about their fears, interests, and concerns. It's important to be aware that your students are having a disparate experience due to COVID-19. One example, their family members might be sick. Some may live in households where their parents lost their job, or their parents are essential workers, so their parents may not be available. Our kids are dealing with a lot of anxiety and fears, and so it's important that we're checking in with them at the beginning, and continuously to make sure that they're okay.

Also, it's important to build relationships. Pay attention to the students who are not there or not engaged. And this is not just for teachers. This is for administrators in districts, staff as well, making sure that we're paying attention to our kids and who they are and where they are during this crisis.

So, the next step is to recognize your biases towards online learning, as well as biases toward students and families. And this is, again, not something we think about in the classroom, but as a school climate base as well. For a lot of teachers, but not just teachers, school directors, administrators, they're being asked to do something that they have never done. They're being asked to utilize platforms that they have never used, and it's important that we understand those biases and concerns so that they can have a nice transition to getting them on board with these new spaces and education formats, and so it's important to address biases.

Also, it's important to recognize that you can still perpetuate biases, stereotypes about certain types of kids and parents if we're not available as well, so it's definitely important to check our own individual personal biases toward our students and families.

The next thing is to engage in active digital instruction as much as possible. Active instruction, active digital learning instruction includes access to technology, even coding design, [inaudible] simulation, game playing, interactive experts and media production, active technology for creation, while passive, consumption. I'm going to say that this is actually hard to do, and it's a huge connectivity challenge. So, access to digital instruction needs to be balanced with connectivity, and we know that video download streaming an online learning require a lot of bandwidth, which is a problem with those who do not have strong broadband ability or use their phone data, so it's important that this is just a solution that you can work towards, even if you're unable to accomplish that right now.

Again, as I said earlier, invest in social/emotion learning and culturally responsive packages in the curriculum. And in terms of special education with specific groupings of students, it's important that we consider a team approach. When I say that, I'm talking about parents, caregivers, family liaisons, teachers, case workers, community leaders. When we're talking about developing instruction in curriculum for special education learners, supporting and developing instruction for English learners, supporting homeless students and their families. But in all honesty, we should be utilizing these resources and this approach in terms of team partnerships with all of our students. And we'll talk about curriculum when we talk about practices, and even teacher learning plans. It's important that we are thinking about this as a community approach and not just as one individual person.

And then my last point here is this, we have to think consistency. We have to make instruction in learning process as routine as possible despite the circumstances. Because of this pandemic, because of COVID-19, students are out of the scene, so how can we make this remote learning space a place of safety? So, in terms of thinking about scheduling, classroom management, grading, teacher office hours, even with our other entities, how do we create a space where people our students and our kids and our families feel safe in these environments? So, thinking about how to make this as consistent and routine as possible is important here.

So, I know I talked a lot, and so now I think we're going to move on to Q&A, and I'm going to return this back to Steve to facilitate Q&A, so thank you for your time.

[Steven Malick]: Thank you, Heather, that was so much wonderful information. Really appreciate you sharing that. I think one set of questions, as we're reviewing the Q&A, is if you have any additional thoughts about how to support and serve children with disabilities and their families, I know you've shared a bit already, but is there anything else you wanted to say on that?

[Heather Bennett]: I do. It's important to recognize that they are diverse learners as well. We group them all as, like, special education. But our students who have disabilities or who have IEPs have different learning needs and challenges; right, and so it's important that we make adjustments to their IEP and work with teachers to help them make adjustments. Let's work with teachers and parents to make adjustments to their IEP through this virtual setting. It's important that we're supporting these differences and challenges together as a group, a team partnership. I think it's important to seek out software for the needs of your kids, and there's really a great website that [inaudible] has a whole lot of resources specific about different ways we can work with students with special needs, and it's educatingalllearners.org. I think it has a lot of -- I call it kind of like a brain dump of all the different resources out there for special-need students.

I was doing some more research on this, and another thing is just even how we are implementing our instruction. I've read that utilizing these larger fonts, really thinking about the way our lighting is working through these digital learning platforms, turning on captions in videos. These are just certain things to think about to do when we're talking about working with and including students with special needs into the conversation, but also into the instruction. But, again, it's really important to think about it as the fact that it really depends on their IEP and really working with them as a community partnership with parents, liaisons, specialists, teachers, and special ed teachers as well, to think about how do we use in IEP new learning platform into the new digital learning space is important to note. Yeah, again, it really is important. It really matters to the student in recognizing that they need to plan accordingly, they have the planning needed to be able to move this forward for our kids.

[Steven Malick]: You know, Heather, I think, related to that, we're seeing several questions just wanting to get the specifics, whether it's the federal grants or grants for devices that you talked about earlier, a page summarizing the ideas for active digital instruction, those sorts of things. And you just referenced one resource that folks could go to. Would there be any other kind of places you recommend folks check out that they could find additional kind of information on these, dare I say, nuts and bolts kinds of questions that folks are bringing up here?

[Heather Bennett]: I think it's important to, first of all, check out state resources. They are important. In terms of nuts-and-bolts spaces, I don't have a list right now in front of me specifically about all these, but I can definitely provide some resources after this webinar is over. Again, it's really, really important here to recognize that our kids need different resources, and that's why I don't have specifics, outlined specifics right now. It's important also to recognize that their IEP requires as well. And so, I'm very cautious to say this is what you should do, X, Y, and Z. It's important, really, to take, really, a team approach in making sure that we're with parents and students and teachers, as well as specialists as well, and making sure they have access to those specialists during this timeframe as well is important. But I will also go into this.

It's important to develop and maintain routines here. I think especially with some of our students who require cognitive behavioral supports. It is extremely important that we're creating a space where our devices are usable for them, that they're accessible, and that it meets their needs specifically; that we are making sure there is a routine in place; that the parents know the routine, the teachers know the routine, the students know the routine, so we can make sure that things are done as easy as possible, despite this extreme shift and change in education practice as a whole.

So, I think in terms of, again, I said earlier, I don't really have specifics like X, Y, and Z, but I definitely think about it in terms of the world as a whole-rounded approaches utilizing your team, making sure you are sitting there and discussing how to reformat the IEP to fit the digital learning spaces. Making sure that there is a routine in place is important, and also making sure that when you're giving instructions, that it fits the specific needs of that student are the biggest takeaways that can provide right now. But, again, I will provide some more resources after this webinar is over.

[Steven Malick]: Thanks, Heather. Maybe two more questions for you. This next question, I think, kind of follows up on that pretty logically and is something I kind of put my resume in thinking about talking to the young people in my family, and the question is, how do you convince teachers it's important to check in which students and ask about their fears and concerns and how they're doing? The person goes on to say, you know, fear about triggering, kind of the experience happening; that could be triggering or traumatizing for them, as opposed to the flip side could be true too, that kids are picking up on something is not normal, and not talking about that could also be odd to children. But, yeah, I would love to hear your thoughts on how to convince teachers and maybe even approaches for teachers to broach the subject with their kids.

[Heather Bennett]: You can start off kind of at the very beginning of the lesson; right, and just kind of give them a second. And you have all those wonderful -- I don't know what virtual platforms anyone is using. For Zoom, you have all the emojis and all the special things you can kind of utilize to kind of check in and just say, hey, are you okay. Give me a thumbs up. Or just kind of ask the question at the very beginning of the day, like, how are you feeling? Name one good thing, one thing you're concerned about during this time. And this is kind of a social/emotional learning practice, so it just creates kind of community from the very beginning.

But, also, it can create a routine as well. I talked earlier about routine. As you are utilizing that same format throughout the lesson, through the instruction, throughout the time throughout the instruction, you start to recognize that kids will be ready for it, and they might start to engage a little bit more.

Also, we talked earlier, in early part of the presentation about office hours. If students are not uncomfortable talking about it as a group through these platforms, having, you know, teacher office hours is an extremely important method as well. Again, having the teachers share about their concerns and fears is important. Students are not the only ones going through this issue. It's everybody, and so it's important that teachers are able to share about their own concerns, about their own fears to kind of bring more students in.

Again, this is about building partnerships and building community at the end of the day, and having that being a part of the classroom day is important. And I'm not just talking about teachers and students. Administrators working with teachers, asking them how they are doing, making that a part of any type of professional development or instruction. School board members, they are meeting together. Just having a space for humanity, I think, is extremely important to start off any program or meeting.

[Steven Malick]: It certainly resonates with me. It reminds me of some research around early childhood and letting kind of children take the lead, and we can apply that to all levels of people, you know, whether they're young children to older children to adults, I think there's a lot that resonates with me in terms of the value of that.

I think one more question for you, Heather, and then we're going to turn to kind of answer some questions that came up during an earlier portion, when we were discussing [inaudible]. But one of our advanced questions, Heather, asked about how schools should start thinking about getting ready for the next school year. And I know that seems so far away. We're still trying to figure out how to get through this school year. But, you know, hopefully when kids get back to the class in the fall, you know, some of the equity issues that you've discussed might be playing out in new and different ways, or exacerbated ways. I'd love to hear your thoughts on what thinking schools and districts and states could be putting into place now to get ready for that.

[Heather Bennett]: I think it's important to recognize that what we're seeing right now is districts and teachers and school leaders moving very rapidly and quickly, and also recognizing how flexible they can be in trying to provide instruction for students. So, it is extremely important that we start to really look at our data, looking at our data before the pandemic, during the pandemic, and after the pandemic to start to think about what are barriers to opportunity, what are the disparities that existed, and also how have they widened through this process? So, really thinking about that data piece is important. If you have not conducted an [inaudible] audit yet, I think it is extremely important to do one right after to at least get some semblance of normal.

I think it's also similar to plan for future for the new school year. It's also important to recognize you have to include parents and student voices into whatever planning process is necessary, because how Covid-19 impacts -- how it has impacted different demographics has been very disparate, so it's important that you really are including the voices and, really, the stories of different groups of students and parents and families and community members into whatever planning space as well, planning structure moving forward.

It's also important to recognize that you have to start thinking about this through an equity lens. I think a lot of districts are recognizing more and more every day that what we're seeing is -- I call it inequity bomb or inequity accelerant. We're throwing gasoline -- Covid-19 and the impact is like throwing gasoline on an already explosive fire. So, it is also really important that we start to look at our policies and our practices as a whole and to recognize, okay, how will we perpetuate inequity through those spaces, and, of course, professional development.

So, I think in terms of planning for next year, I think it's important that districts are starting to think about this systematically. I know it's crazy right now. I know we're all in a crisis right now, but it's so important that we start to put some things in order, at least some steps, really develop it, getting task-force members involved and just starting that and just kind of looking at the data from before and sort of looking at the data while it's going on to start moving towards a plan for the future, because it's the plan for the future that we really have to worry about. I think we're going to see widening disparity gaps because of the outcomes of the pandemic, and so it's important that we're starting off the ground running when this crisis has come to a close.

[Steven Malick]: Thanks, Heather. It kind of makes me think that, in a lot of ways, we have kind of the thinking and tools. Those things exist and are out there to help us tackle the challenges we're facing now. But it's about using them in new and creative ways to really make a difference in kids' lives. And I don't know if that's taking a step too far, but that's kind of what I'm hearing from you as you're sharing those thoughts, and thank you for that.

[Heather Bennett]: Absolutely.

[Steven Malick]: So, we are going to take, I think, maybe three more questions that have come through, and then we'll start to close up. We did receive a question about -- so Felicia had discussed Evidence to Insights tool, and someone asked if this tool, the e2i tool would help schools determine the quality of the remote learning plans based on a set of quality standards? Felicia, did you want to tackle that?

[Felicia Hurwitz]: Yeah, sure. So, e2i Coach is a tool to help you determine whether you're moving on to get outcomes that you're prioritizing; for example, whether providing ample content, increased engagement, assignment completion synchronous content compared to asynchronous content. But it won't [inaudible] learning based on a set of quality standards, and I think we invite everyone to join the upcoming webinar, which will dive into that tool more. Steve, did you tackle a few other questions before we wrap up?

[Steven Malick]: Yeah. We had a question about what the literature says about supporting learners of English and when they require -- supports require language while also learning the content? And we thought this was a real good question. And, admittedly, we've only begun to scratch the surface in our literature scan. So, we won't be able to definitively say the literature says X, unfortunately.

What we can say is, you know, we did find positive impacts on English language learners in a variety of interventions. One involved a website-based vocabulary game, one involved interactive inquiry instructions, and another involved collaborative learning activities. So, you know, you might think about what those sort of things, you know, collaborative learning activities for instance, students talking to each other, you could think about activities that you could set up in place that would allow students to talk to each other about the content, that they're learning to tackle that. You know, but, again, we're just beginning to scratch the surface of this, and we would imagine other supports might be needed depending on the content and level of acquisition that the student has.

We also received a question about synchronous versus asynchronous learning. This person says, I'm so curious about synchronous versus asynchronous, finding that since digital inequities lead to more asynchronous opportunities, what is it about synchronous and can those aspects somehow be improved or increased in asynchronous offerings? And our response is, we agree.

We're pretty curious about this too and want to learn more. We wonder, you know, kind of are wondering based on our understanding in the literature at this point, and, again, needing to dig more into this, our wondering was, if had something to do with the combination of real-time feedback on ability and relationship building that you do in person? And so our wonderings were, you know, how could you create opportunities to give these sorts of sentiments in an asynchronous setting. You know, for example maybe it's watching a video and then reading the text and having a structured follow-up call with a friend to talk about it, or, you know, have a small-group check in with a teacher.

But we definitely agree that this question is worth more exploration, and so I think, you know, what this kind of response and, hopefully, the spirit of what we've shared with you all today really gets at, you know, there are some kind of arrows pointing in some directions, it seems from the literature, with our very exploratory literature scan that are pointing to these promising strategies, and it's up to us to kind of make sense of that and think about what works, what we think might work, and then trying it out, and then hopefully using those continuous improvement cycles, evidence-informed continuous improvement cycles to monitor where we're at, and steps we could take, and learning from what we're doing to share build best practices with others.

So, thank you all so much for those questions, and I'm going to pass it back to Felicia who is going to close us out.

[Felicia Hurwitz]: Thanks, Steve. So, in the next few weeks, we really want you to look for more sources from the REL, including an infographic directly related to this webinar. The access website on this slide will provide a full list of COVID-19 list resources all across the country, including a link for the next upcoming event, which is a quick chat from REL Central called "Strategies to Support Remote Learning Along a Continuum of Internet Access," and that event is on April 16th. In addition, we also invite you to visit the Comp Center COVID-19 compendium for more resources for schools, and I'll mention that both of these links are available on the dashboard on this webinar.

So, we want to hear from you. At the end of this webinar, we're going to ask you to complete a brief survey. We want your feedback on today's webinar of course, but we also would like to hear more about the related topics that you would like to learn more about. And as a reminder, this webinar recording will be posted on our website, along with a full list of citations that we used as part of the webinar.

So, I just once again, want to thank everyone for joining us today. This slide provides contact information for all of the speakers. Please don't hesitate to reach out if you have further questions. Thank you.

[End of webinar]