



Digital Aspirations in Education Podcast S1E6

The Impact of Remote and Hybrid Learning on the Future of Education

Jared Heiner, Director of Education Innovation and Sales at Aspire Technology Partners, with Dr. Jason Vickers, Department of Education Theory and Practice, University at Albany and Dr. Alex Kumi, Assistant Professor, Education Theory and Practice, University at Albany.

Jared Heiner: Welcome to another episode of the Digital Aspirations in Education Podcast, sponsored by Aspire Technology Partners and Cisco Systems. I'm your host, Jared Heiner. I'm excited to be here today with two esteemed individuals, Dr. Jason Vickers from the Department of Education Theory and Practice, University at Albany. Jason, welcome. And, also, Dr. Alex Kumi, Assistant Professor, Education Theory and Practice, from the University at Albany.

And I invited both of you fellows in because, really, it excites me, oddly enough, that here we are in the middle of a pandemic and it's changing education dramatically. We're in a situation where a lot of folks are heading back to school—especially at the K-12 level where everything is different. It used to be brick-and-mortar instruction. It used to be an environment where there was such tradition in familiarity, but that has all changed.

And so, Dr. Vickers, I'll start with you. How has this pandemic really changed how education has been delivered? Obviously, we see hybrid and remote, but what are some of the biggest changes that you're seeing coming down the pipe as we walk into the next school year?

Dr. Jason Vickers: Well, I think that depends on the state that you're in, first of all. And I'm physically located in Georgia. What they're doing in Georgia is they gave the opportunity for all students to learn online or to learn face-to-face. And about 30% in my county took them up on the online setting. So, it will be an online environment for, like I say, about 30% of the students, and it's going to be a hybrid model where it's both asynchronous and synchronous meetings scheduled throughout the week.

JH: Now, when you say synchronous and asynchronous, just for the sake of folks who may be listening and that go, "I've heard it," but just describe synchronous versus asynchronous.

Dr. Vickers: Well, synchronous would be at the same time. If you're in a face-to-face setting, that's a synchronous setting. If you're online and you are using a video software like Zoom or Google Meet, that would be a synchronous setting. An asynchronous setting is when you have an individual who logs into a learning management system or a different system and participates at a different time than the rest of the individuals who are participating.

Virtual Instruction and the Digital Divide

JH: And so, that brings up some peculiarities because if I am a parent—maybe not an instructor, maybe not a teacher—in this day and age, and I'm hearing somebody talking about those things, I'm so used to having just traditional instruction. Are we prepared to move into the virtual realm with these types of instruction? And Jason, I'll ask you first. And then, Alex, I'll ask you for your thoughts.

Dr. Vickers: That's a really good question, actually, because if we look at the research, and we start looking at technology within the household—recently, within the past two years, we've seen a shift of internet usage that goes towards the smartphone. And around 60% of individuals, 18 to 29, access the internet using a smartphone. And about 47% to 50% of individuals for 30 to 49-year-olds will access the internet using smartphones versus a broadband connection or a hardline connection.

And that's very important to understand because when we start looking at different demographics and socioeconomic status, people who typically earn less than \$30,000 per year, about 71% of those people have smartphones. So, they're accessing the internet more than likely using smartphones because that same population, only about 56% have broadband connection and only about 54% have computers or laptops.

Now, this is significant because in order for an individual to access an online management system for a course, they really need broadband connection. A smartphone isn't really going to cut it. It's got very limited usage. You can access the internet and browse, but the browser features look very different than on a computer or a laptop. And any application that you download is going to be very different than the application that you use on a computer.

And let's say, for instance, I go to Google sites or I go to Google Docs, which is a document editor, you can't really use that on a smartphone because the screen size is so small. So, it's going to limit your ability to craft responses in an asynchronous setting and upload documents; whereas a person on a

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laptop computer will be able to do that. And so, we effectively are eliminating 50% of the population who make less than \$30,000 a year, and that's known as the digital divide.

JH: Yeah, and that's a great point. I mean, a lot of times, we think of the actual instruction delivery from a person-to-person perspective in the classroom, i.e. how am I pedagogically sharing this? You're talking about almost the infrastructure piece, which is, are we in a position to really provide instruction over the internet? And to your point, I mean, I think I watched half a Game of Thrones on my iPhone and I realized what I was missing when I switched over and started watching on the big screen.

And I make light of that. But Alex, can you extrapolate on this a little bit? Because we know that there's this digital divide and we also know that there's a dilemma with socioeconomically kids having access in support. But what about the teacher training, as well, to be able to move from brick-and-mortar instructions, sage on the stage, to all of a sudden, I'm now doing this, whether it's synchronous or asynchronous, through technology?

Dr. Alex Kumi: Yeah, I think that has been the problem with the online learning at the K-12 level. Like Jason said, it actually depends on the state. Some states - I know of Georgia, Florida, Michigan, Alabama, and then I think Arizona, some parts of Virginia, and Wisconsin - are doing pretty okay. I would say it's a big plus in online learning at a K-12 level for those states, especially Florida, because it has more than half a million students from 1st grade up to the 12th grade level doing online learning. There was a time that they even said you have to take, at least, one class online as a K-12 student. So, some states were doing very well.

Coming to the issue of the digital divide: I think it's all about resources of the school district. Some school districts were able to give one computer per student, so that you can just take classes online or use it for your homework and stuff. Other states were not doing it or depending on the school district.

But there has also been a big argument that if you can buy \$800 iPhone, and then you can buy a \$150 Chromebook, so which is which? That's the argument that is going on. This pandemic has forced school districts to consider the issue of online learning at the K-12 level. Many students in most school districts decided to do a hybrid option. The school districts must find a way and a means to provide each child a computer or laptop, most usually a Chromebook, for these hybrid courses.

A broader issue is the socioeconomic status. Fortunately, the United States, as a super-world country, has access to technology and are on top of everything when it comes to access to technology, especially online learning.

School districts have given students affordable Chromebooks, whether it's Dell or Acer. If the class uses Google Docs for assignments, students can access it. Parents aren't required to buy Microsoft Office. Their child can use Google Docs, and he or she can just submit his or her assignment. And research has shown that it's working fairly well.

So, to end, I would say that the digital divide is there; however, looking at the part of the world that we are in, I would say more than 70% of students have access to a Chromebook. Had it not been for the pandemic, you could easily go to your local library and use the computer to submit your assignment. But with a pandemic, all those assets have been closed. But the report, the initial report, that has come out is saying that almost every school district was able to offer an online program for students.

JH: And you're spot on. And again, I was down in Florida, and I found that the countywide districts seem to make a difference. States like Georgia and Florida—when they start looking at these large counties and making decisions, it's not the same as when you head up north to New York and Massachusetts and Pennsylvania. It's less of that larger scale approach where you do see folks coming together. And to your point, you have to take an online class. It's dependent on the local district. And then, it kind of falls apart.

But to what we're talking about as well, yes, schools are giving students devices, but some of these areas don't have the bandwidth. They don't have access to telephone poles to put Wi-Fi on. And so, you give a student a device, but they may not be able to do anything with it. In fact, I remember being in West Virginia, talking to some educators out there, and they had no ability to communicate back and forth because, again, that digital divide piece is there. The inability to receive some type of connection exists. So, that, obviously, is a huge obstacle.

Planning for Synchronous and Asynchronous Virtual Instruction

Moving back into the classroom, we have to find ways to overcome a lack of technology or lack of connectivity. So, Jason, if I'm a teacher right now, and let's just say it doesn't matter where I am, I know I have to move to a Higher Ed scenario or a virtual scenario. I've got synchronous. I've got asynchronous. What steps do I take? Give me two steps or three steps you might take if you've never been there before.

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Dr. Vickers: Well, I think that speaks to the issue of pedagogy, and it really depends on the discipline that you're teaching. If you're teaching a Humanities course, for instance, at the high school setting, you might just need to provide readings for the students, create many lectures for students, do videos for students, allow them to access that technology, and then have small-group discussions through your course management system using a discussion board.

If you are teaching a hard science course, you might need to have more direct instruction, more of that sage on the stage, as you put it, than the student collaboration model, which would be of the Humanities course. So, really, it depends on the discipline on what your class would look like. So, there are no really hard and fast rules on what steps you can immediately take to craft an online course.

JH: So, going forward with that, yeah, I agree. And the dilemma we run into is that folks are there. And I know one of the biggest concerns, especially from educational leaders, and a lot of superintendents is lack of available resources to help them make the transition. And, obviously, professional development is one of those areas where there's never enough time, and there's never enough money.

So, Alex, what are your thoughts, in terms of weighing in and saying, "You know what? If I'm in that position, and to Jason's point, everything's a little bit different," how do you as an educational leader help folks take that step forward if you're going to say, "Well, now, you're going to have to find a way to virtually do this"?

Dr. Kumi: I've experienced this before as a K-12 teacher in Florida. Tampa, to be specific. A lot of people think, when you're going to teach online at the K-12 level, that there's a big Boogeyman somewhere that you have to go through so much. It's actually commitment, and then preparation. You can get an hour training virtually. And then, from there, you start designing your courses.

So, the good news is, as teachers, we are asked to do lesson plan, and unit plans. So, it's the same thing. You have to plan before you go to the classroom to teach face-to-face. So, for online class, I think Jason will agree with me, it's not about just going in this week, and I'll do something. Next week, I'll do something. You really have to plan the whole design of how you'll teach lessons in Social Studies, and American Government.

For the semester, you plan, just like your unit plan. And then you put the materials and resources there, so that when students get there, it will be like your teaching presence is going to be there. The social presence is going to be there, and then they can read and get some cognition. They would learn something.

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So, it's not like day-to-day activities, or a week-to-week activity. It's commitment. It's their preparation. And then, of course, background knowledge. For the background knowledge, in this part of the world, you can watch some YouTube videos on how to design an online class. The district can organize a professional development through Zoom, or Skype. And then, you learn about preparation.

I just read something. I watched a little video on Blackboard. Five years ago, I would have been bothering Jason. But I went there, and then I saw videos and stuff like that, so I was able to do it. So, that is the good news part of it.

JH: Well, Alex, you made two comments that I want to follow up on. You talked a lot about the preparation, but then, and maybe without even knowing, you said that you have to make the stuff available. And I think that's one of the biggest differences. As educators, we're so used to being in a classroom. Until you make that move to a virtual scenario, you realize that you can kind of put all that information in the cloud. And, really, it needs to belong there because kids want to learn when kids want to learn.

And to the point that was made in the very beginning, Jason, you said that almost everyone has access to the internet but there's such a change between 'I'm the holder of the content' versus 'I'm now going to relinquish that and put it online'. That seems to be a big obstacle. And Jason, I'm going to ask your thoughts on this, but I also just want to make a point. We have all of this other stuff. I mean, Khan Academy, YouTube.

I remember a number of years ago, when my garbage disposal broke, it was going to cost me about \$250 to get a plumber just to come look. And I went online, and I self-educated through YouTube, and I fixed the problem. But doesn't the same hold true for the classes that we have in K-12 and the access to something. Obviously, we're not talking about first and second grade. But to that point, there is still content available for every grade.

Dr. Vickers: Yeah, there is going to be content available. Some teachers are going to use that content online, such as Khan Academy, but some teachers are going to need to craft their own information. And, as Alex said, you really have to pre-plan, and it takes about two months to plan, two to three months to plan for a semester-long class at the college level, at the very least.

To put things in the cloud is much easier now than it used to be because there are learning management systems out there such as Schoology, Moodle, Canvas, and Blackboard that teachers can utilize as their

mediums of information in order for students to be able to access it whenever they need to access it. So, we have this availability of information online within self-contained learning management systems that students can access. So, it's a very simple thing to do nowadays, in terms of sharing information and finding information that others are sharing.

Dramatic Possibilities for Education Transformation

JH: Well, and that leads to an interesting point, which is that we can start sharing more. One of the conversations that I've had along the way, especially now when we look at schools that are facing this pandemic, regards where students will learn and how educators will deliver instruction.

Let's say that you've got one instructor for a particular course—say it's a high-level Math course. If a neighboring school has that, couldn't we conceivably make it available? Doesn't it kind of breakdown the boundaries now to say, "Well, maybe as school districts, we should work together in new ways"? I mean, can this pandemic, Alex, change education dramatically? or do you think we'll go right back to where we started?

Dr. Kumi: I think the train has started and we can't really stop it. Online learning has gained momentum over the last decade. And there was some personal resistance. I teach math. I want to teach face-to-face. I teach Physics, and I can put my class online. I need a social presence in discussions and stuff like that. This was some of the usual disconnection or, I'll say, resistance to online learning. And then, all of a sudden, this thing came in, and then Chemistry, you have to put it online, and student go to the lab in groups and stuff like that.

And then, another issue was that online learning was a little bit expensive. You pay more, so that you can take online classes. And then, I think, at this point, I would say, it was also the policy of the state. If the state or the county says, "We are going to do this," you couldn't stop it. But now, it's like the train has moved, we can't stop it. So, it has actually come, or it is going to change the pace of face-to-face learning at all levels.

I think what we're going to see in every state is what was going on in Florida and Georgia, Alabama, Arizona and Michigan, to be specific, where they have online K-12 schools. You just take your classes online. In New York, this area, I think, it was here, but it was a little bit more expensive and the number wasn't as big. However, in the south, in Florida, to be specific, some counties even have options, or alternative options of online school where you don't pay so much.

So, I think that is what is going to happen now. Looking at infrastructure development based on where they have more population like New York City, they probably will create some alternative path for students and say, "These courses, you can take it online. These courses, you have to come face-to-face." I think that is what is going to happen now. I'm pretty sure because people have started writing *New York Times* and other places about, "Hey, this is an opportunity for us to have an alternative path for students to choose."

JH: And I tend to agree with you that we're not going to go back to where we were. I think, again, situationally, from a developmental standpoint, some states are going to be ahead of others. Some schools are going to be ahead of others. My question for you, Jason, is I see a lot of that, when Alex said the train has left the station, there's a lot of educational technology that's out there.

And just the other day, I was watching a video clip of a school that has said, "We've got, essentially, a tech camp running for our teachers and we're preparing for virtual learning." And there's no right or wrong way, pardon me, to address that, but what I found fascinating was that the training was around applications, not necessarily pedagogy. So, how much do you think the private education technology industry is going to influence the change that takes place? And is that a good thing or is it a bad thing?

Dr. Vickers: Well, it's kind of both actually. It's good because these technology companies are making available different applications and different things that will allow teachers to have a broader audience and to be able to reach their students at different times and in different places, so you don't have to be a local student anymore and you can actually be away from the district. So, you just had to leave, your parents had to leave the district, and so you weren't there. So, you have a broader reach.

But it's almost bad because we're not really focusing on the pedagogy as much. They are focusing on the technology and "Hey, this is the next best thing by this particular product." But teachers, I think, aren't as prepared pedagogically to be utilizing any technology sometimes because there's often a shift from the brick-and-mortar school to the online school and the pedagogy in that means you often have student-centered courses versus a teacher-centered course.

And that's a different type of teaching completely because you're not going to be sitting there being the sage on the stage and giving all the information out. Instead, it's almost a discovery type of learning that students will do collaboratively. So, it's like a collaborative discovery type of learning, and you have to have certain skills and tool sets to be able to manage that particular type of teaching. And we're not

focusing on that. We're focusing more on professional development for applications versus that pedagogy.

JH: No, you're entirely right. And I think when I look back, and what happened was, when everybody hit that kind of crisis mode, and we sent kids home, and some students were able to bring their devices home, it turned into a "How do we lift the brick-and-mortar master schedule up and make it virtual?" And the problem, and I can speak to this because I had a third grader, you cannot go from 9:00 to 3:00 with a third grader and expect them to sit in front of a screen, let alone, how do you do things like physical education?

Now, don't get me wrong. There are solutions to that, but I think that's one of the biggest obstacles. And I see it rolling out more and more. Schools have said, "Well, all those kids that have chosen virtual are going to have to be okay with the brick-and-mortar schedule." And that scares me. Jason, is that fair to you?

Dr. Vickers: I think it's very concerning. I mean, I'm not horrified by it because it's something that I kind of expected for them to do. Schools need to be a little bit more flexible and understanding that students are going to be learning at different times. And especially when you have more than one student in a household or a child in a household, there may only be one computer. And so, the students or the children are going to have to share that computer to learn online and to learn in general. And the schools are going to have to be more flexible versus saying, "Okay, you're going to be going from 9:00 to 3:00," and be saying, "Okay. Well, you're going to do this on your own time. And as long as you have it done by X date, that's acceptable."

Project-Based Instruction for Virtual Learning Environments

JH: It almost sounds like it would be more project-based instead of - and I guess, I'm going to call it schedule-based. Schedule-based meaning, "Well, we've got 40 minutes, or 60 Minutes or 80 minutes together today. I need you to get X, Y and Z done." It almost sounds like if you're in that mentality you're essentially assessing a student based on what they're able to accomplish in a time frame. Alex, should we be moving to a more project-based learning environment when we go to the online scenario?

Dr. Kumi: Jason had mentioned it earlier about learning collaboratively where it's student-centered learning, and more than "the teacher knows all", and the teacher centered instruction. I think project-based could be part of it. Game-based, where more of the student come up with the ideas. Project-

based, problem solving, all that. There's a big debate when you talk about project-based learning as against the other moving away from testing. We have different theories battling it here saying that testing actually measures the cognitive ability of the student of what you have learned.

And it goes on earlier, as Jason has mentioned earlier, you don't just put stuff online and say, "Student, hey, online learning, just do it. I'll come later and grade it." I think that's where the pedagogy comes in. Teachers must know how to really facilitate online learning. Their presence must be there most of the time. It's not just about just, "Discuss this and I'll come back later." The teacher, the presence must be there. Once your presence is there, the social presence is there, depending on either is if it's synchronous or asynchronous.

And to answer the question bluntly, I think it's a very difficult question. I would have loved if we had project-based and all, but the decision comes with policy from the state, the county, to the school district. So, maybe with this interview, we make an argument that a project-based approach also should be taken into consideration. That's what I would say. At this point in the journey, I would say we should take into consideration where project-based learning should be highly considered.

Parting Advice for Online Learning

JH: Well, and I guess why I'm pushing it and we're coming up to the end of our session here, so I'm going to ask this. I'm going to press the question and it's what I've been going all along. This is going to be a tremendous shift for a lot of folks. In fact, I get a kick out of it all the time, and it's not the putting one down because we're on different places, but I've heard folks saying, "Well, you know what? Now, it's time to retire because I don't want have to learn how to do it in a new way."

And it kind of goes against my thought about what education really is, what learning really is. There isn't a one-way approach. So, here's the push, and I'll start with Alex. And then, Jason, I'm going to ask you the exact same thing. If you were standing there, and maybe you wake up, you open your eyes and you're standing in front of 500 K-12 teachers, and they go, "Tell us two or three things that we should do to prepare." Because Jason, you said before, it takes two months. They got maybe four weeks. In fact, there's some schools down south that have already started. You're literally in the midst of it. What is your recommendation, Alex? Give me two things that you would say, "Here's how I would change pedagogically." And again, I know it's specific to courses, classes, age groups, but where do I start?

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Dr. Kumi: I will say the first thing is to prepare yourself for teaching online. That alone, I think, is good. Allow yourself a reflective process that you will not teach face-to-face. I'm going to teach online. Whatever pedagogy you are going to use to teach online, make sure you have a lot of activities in your teaching and learning process. Have a lot of activities, include a lot of activities in your lessons. Let me put it that way.

And then, also, consult a veteran, somebody who's more into or has a better knowledge than you in terms of using technology or teaching online. I think I'm using the word consult the veteran in terms of in every school district or in every school, there's somebody who actually is more into this handling of digital tool kit, how to use it. Consult that person a lot.

And then, also, I still insist, I'm using my own experience, you have to prepare. Even if it's one week, you can design like three weeks there, so that you know for three weeks, okay, you are secured, and then you move on.

And then, the last thing I would say, I'm probably saying more is please make sure your presence is there always online, in the virtual presence. It's not one week, I'm not going to see anybody. Make sure your presence is there. And then, communication, you keep communicating with students.

JH: Yeah, so even if you give an assignment that they're working on individually, you're still holding that period of time, which in the collegiate level you'd say office hours, but in the K-12 level, you're available. You're available to answer any questions. So, yes, you did go over two or three, but Alex, they're all great. So, we'll give you credit for those. Jason, what are your thoughts?

Dr. Vickers: Alex stole all of what I was going to say. I would add engagement. You have to really focus on student engagement. And student engagement with one another, student engagement with the teacher, and especially student engagement with the content. And Alex mentioned to prepare a lot of activities, and you really need to prepare a lot of activities, so students are continuously engaged, and they're actively learning versus passively learning and receiving this knowledge. They need to be active in the class with one another and with teacher monitoring those different types of student-to-student engagement. And you combine that with your student content engagement and your student teacher engagement, and that really begins to shape the way your classroom will look and function.

JH: Yeah, great suggestions. And that engagement is at the heart of it all. And I think, as I was listening, we sum it up by saying that when we go online, the collaboration is hugely important, but that's the same thing being echoed on our own professional levels. We need to have collaboration. And

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gentlemen, listen, I appreciate it, Dr. Vickers, Dr. Kumi. This was awesome. I would love to be able to jump back into this conversation again with you folks and maybe some colleagues. And I think that there's a great discussion. And I think we've got a tremendous opportunity on the horizon.

So, gentlemen, thank you so very much for joining me. It's unfortunate it has to end, but like all things, we will pick up again next time. And I appreciate everybody joining in on this episode of the Digital Aspirations in Education Podcast, sponsored by Aspire Technology Partners and Cisco. Thank you very much. And gentlemen, enjoy your weekends. Really appreciate.

Dr. Vickers: Thank you, Jared.

JH: Great conversation.

Dr. Kumi: Thank you.

This transcript has been edited for clarity

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