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Episode 4: Deciphering digital education trends

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Heidi: Hi, I am Heidi Rataj welcome to Deloitte's User Friendly, where we help your business navigate emerging tech, media and telecom trends.

Greg: Open your phone and think about how many apps you have on it and how many you'd have used in the past six months, now if you are a parent, think about how many of those apps were loaded on there for or by your kids and how many they use. The reality is, kids make a snap decision about what is cool, what is engaging, and what is just boring as all get out. Or frankly, what's been replaced. That mentality carries forward into the classroom. The kids don't change their mentality when they sit in the classroom. If there is something that is more engaging, if there is something that is creating a better result, in the eyes of parents, teachers feel that there's something that accomplishes both, then they are going to choose that solution, that approach over something that doesn't provide engagement, doesn't provide results and frankly doesn't provide them with the kind of classroom environments that they want.

Heidi: Joining me to discuss trends in digital education are Greg Merchant, Mic Locker, and Jennifer Eng. Welcome to the show

Group: Thank you. Thank you. I am happy to be here. Thanks

Heidi: Excellent, this is a really exciting area to discuss because we are all inundated with digital devices. So digital education is a really, really important subject to talk about. Greg, the digital world is transforming everything we do, so why do a survey about Digital

Greg: That's a great question and not only because I have three little boys, so this hits very close to home. For my entire career I've been involved in digital transformation across different media sectors and one of the things digital does is really accelerate connections. We believe that some of these connections are significantly misunderstood. The $27 billion question for companies in the digital education space, is which of these are going to matter most? There's really not a lot of great research out there about the connections themselves. There are good observations and good studies about what happens in the classroom. There are good studies about what happens at home. But there is not much about how the different connected pieces of the education system work, so we went out and developed some data ourselves and designed the survey to add some quantitative data and insight around these "bet the company" decisions that a lot of our clients are making.

Heidi: I love that you're thinking about it; really, really strong beliefs especially about education and then you get these surprises. Jen, I understand you're a digital native so welcome, were you surprised by the survey findings?

Jen: If I reflect back on my elementary high school education a lot of it was I guess traditionally analog. So, it was surprising to look at some of the pieces of data. We wanted to understand at what age students were typically accessing digital learning at home. And what we found was that 90 percent of students who were surveyed, said that they did have access to digital learning at home and two-thirds of them started by the age of 5. We were definitely surprised that the average age was 5. When I think about going to the grocery store, I often see two-year olds using their parent's phone. It's a way to keep them quiet while their parents are doing whatever it is that they're doing. So it seems hard to believe that the average age would be five rather than younger. But if you think about how old the iPhone and the iPad are; ten years and seven years respectively, it kind of makes sense. I would definitely anticipate that the age at which they start will continue to go down as digital really infiltrates every aspect of our life.

Heidi: I always thought just that the tablet was there, to quiet the child while you're trying to pick which pizza to purchase but… None the less, you know Greg I…

Greg: It works pretty well for that too! [Cross-talking and laughing]

Heidi: What's that game? just follow the dot, don't worry about it, I'll get the yogurt when I…..anyway. So Greg, this idea of being in the world of transformation having three little ones… This tutelage and your stewardship are going to be so important in choosing digital education and how that all comes to be. On top of that, from what I understand, you are four generations of teachers in your family. So,what did the surveys tell you about the role of teachers in digital education?

Greg: Yeah, I could also tell you what advice four generations of teachers gave to me. They definitely let me know that there has been a mixed history of consulting involved in education. As we sat around at Christmas dinner I was told in no uncertain terms that I had better make sure that I am getting the teachers' perspective rather than just looking at this from a completely external perspective. I think we have done a good job of getting parents, teachers and students involved in this particular survey. However, one of the most important things that we found was that teachers overwhelmingly feel that education technology has impacted their role in the classroom in a beneficial way. And that was something we really wanted to understand better; to see whether there was a general reluctance amongst teachers to bring greater use of technology into the classroom. We felt perhaps they believed it would diminish their role but we found the exact opposite. In fact 70 percent of teachers said that it was either a positive impact or a very positive impact on their role in the classroom and only nine percent of teachers said that they felt that it had a negative impact. When you think about the importance of being willing to experiment in the classroom and being willing to push the envelope to get toward the best solutions possible, that willingness, that embrace of technology by teachers is something that is absolutely critical.

Heidi: I absolutely agree with you that this willingness to bring something into the classroom is to me one of the main drivers. Would you agree with that Greg?

Greg: If you don't have teachers that are willing to experiment with new things, there is a much greater transformation that you need to take on because you're not only transforming the classroom and the curriculum but you're transforming the mind of the people involved in the change.

Heidi: I want to jump into some more of these details, Jen what were some of the key points in terms of the use preference in teacher's attitudes?

Jen: We found that almost half the teachers indicated that at least one digital device is used in their classrooms every single day. We also found that 75 percent of teachers believe that digital learning content will completely replace printed text books within 10 years. That may not be shocking but does demonstrate that teachers believe that there will be a very dramatic shift in classroom learning. I think that makes sense given that we're seeing older generations of teachers who grew up with digital driving that demand towards digital learning.

Heidi: Greg, to me what's interesting about the survey is that it really catches up to beliefs and practices. What are some of the beliefs and practices that came out of the survey for you?

Greg: Someone I greatly respect in the education sector once told me that parents are absolutely wonderful until you need them to do something. I know it's not that black and white but the idea behind that statement was that when it really comes down to it, how long are they going to sit with their kid and do homework? So one of the things we did was ask parents and teachers whether or not technology made a big difference in a particular area like providing opportunities to learn outside the classroom. In the case of the teachers we found that 74 percent of teachers believed technology made a big difference in providing opportunities for learning outside of the classroom.

But, then we asked them how many times they are actually using technology to do that in a specific week? If they said at least three or four times, we said, that's a pretty good match between the enthusiasm and practice. We asked questions in our survey about allowing students to learn at different paces or allowing students to get feedback outside of the classroom and in almost every single case the gap between belief and practice was somewhere between 25 and 41 percent. That really makes a big difference when you're thinking about how far we have to go within the education sector and how much room education technology has to grow.

Heidi: What a tremendous way to think about this as opportunity--digital education really should be seen as opportunities in which we can enhance the experience through these three environments; teachers, parents and students. So Jen, what are the kinds of connections needed between teachers, parents and students?

Jen: Ultimately the lines between learning in school and learning outside of school are continuing to blur and because of technology parents should be able to have a lot more data around what exactly their child is doing in the classroom on his or her performance and areas where he or she may need to spend a little bit more time. So, you could see more of a two-way exchange of information between the teacher and the parent.

There is also an opportunity for students and parents to engage with teachers in terms of getting recommendations for learning materials. You could see more participation from parents and students. Maybe they've found something really interesting or fun that they like using at home that their teacher could bring in the classroom. There is more opportunity to collaborate amongst teachers, parents and students to improve learning both inside and outside of the classroom.

Heidi: I love this idea of a learning life cycle rather than simply independent, teachers exercising their lesson plans; the students learning and going to their world and not really discussing; and the parents just sort of checking in on homework. The digital education survey reveals that we believe that technology makes a big difference in providing learning opportunities, with 90 percent of students having access to digital learning and kids getting their first taste of digital now at five and probably even younger. That's an opportunity to shrink the gap between school and student. So let's move onto findings of the application and transformation. Mic, we heard from Jen about the kinds of connections needed between teachers, parents and students. What are the limitations keeping these connections from happening?

Mic: There are few things that we see limiting the pace at which connections are being made, if we think about this integrated digital ecosystem. In most cases it is technology that's new to the school, potentially new to the teachers, parents and students, and these technologies are required to enable this collaborative network. This takes investments and time for adoption and then finally, if we think about our clients, we work with a lot of the large education companies. They're all thinking about this, they're all thinking about the shift to digital but for them the transition can be a challenge as well. If you think about these transformations, think about a company whose been doing something the same way for years and probably decades and now their product is changing, how they sell their product is changing, how they deliver and service the product is changing and even the customer may be changing. So, all of these changes mean that these companies need to develop new capabilities to deliver the new product and services and to serve customers the way they want to be served today. Building these capabilities takes time.

Heidi: We have seen so many of these kinds of transformations, if we just think about retail and how most of what we do now is online. Greg, I wanted to turn it over to you, because I know you work closely with Mic, thinking through these models of transformation. What are limitations that could get in the way of this happening?

Greg: It's all about who is embracing the new model faster. Time and time again we've seen a lot of reluctance by companies to make the investments necessary to move forward. And some of those investments are emotional; when you think about the classrooms, to a large extent they hadn't changed for about a 100 years. We are now talking about different transition periods. Consider a teacher going from speaking, to a webpage, back to a lecture, to a homework assignment and then to an ed. tech game. In any of these different types of transitions, they have to be comfortable and willing to kind of experiment with those things and how they can work in the classroom. The

reality is, we all know how difficult it is to keep control of a classroom. For example, think about when you had a film strip, if you're as old as I am, in the classroom. The teacher had about 30 seconds to get the film strip running and then the classroom was lost. Those same types of transitions are happening much more frequently and with much greater technology than the old eight mm projector ever had. So, teachers need to be emotionally ready to do that. Administrators need to be prepared to have a little bit of a learning curve. And students and parents have to be excited about what they are going to be able to use. The regulatory environment, the amount of investments and private capital that's being invested in ed. tech, those are going to be important drivers as well. But one of the reasons we focused primarily on parents, teachers and students in this survey was because we were talking about the most important influencers.

Heidi: So, Mic, in terms of, adopting technology, I have heard this reference about the Queen Bee of transformation. I love that, because this is a skill set that is really, really key, right. To Greg's point, this emotion, this ability to transform is so tied into how we feel about it. Share with us some of the potential drivers that you think will help determine connections that matter the most.

Mic: When we think about drivers, we think about demand and supply side, so, there are a couple of things on the demand side. We've talked about some of these already but I think one of the key ones is the shift in taste of learners. We are seeing students seeking collaboration and connections versus just content. Jen talked about the average age at which students are first using technology, five years, probably that age is getting lower over time. That changes the way students think about what they want to do and how they want to learn and that's connected also, to how students are accustomed to mobility; they expect to be able to learn outside of the classroom. I think that's a second demand factor. And then the final demand factor I will touch on is the expectation from students, teachers and parents, for more individualized learning opportunities for students. If we look to the supply side, there are a couple of things that are going to drive the connections. One, is how technology has really dramatically reduced the time limitations and the geographic limitations. Additionally, as new technology advances like, augmented reality, virtual reality, enhanced mobility, A.I., machine learning, etc., all these technologies that open new delivery channels enable parents, students, and teachers to have access to data and enable a more personalized, individualized experience for the student. One of the things that we are talking to our education clients about is, how to leverage the data that they have to create that personalized experience; where the student is actually driving the pace at which they are going to content and the teacher is enabling all the students to work at their own pace. So, that's something that we are talking to several of our clients about; how to shift their content, so that it can be delivered in that fashion and create those experiences for students.

Greg: A number of companies see the potential for that audience for one type of learning solution but it does require a massive transformation in how data is ingested, stored, managed, and used, as well as a much more agile attitude toward product development, because it will never be perfect right out of the box. So, [it's important to have] an agile approach toward being willing to go in and adjust learning paths and being willing to make tweaks around the way things are delivered to students. It's something that is new and it's a challenge for established education companies. It's something that a lot of start-ups are much more naturally inclined to, which creates a very interesting competitive environment where the deep pockets of the old companies require them to change the way things happen, but there is a very real race between a lot of these hungry start-ups who are just much more agile.

Heidi: Good point. What are some critical connections that we want to see in the future for clients and I will turn it first to you Mic.

Mic: All the connections are important. If we think historically, education companies would sell to the school district mainly or the school. That was the connection that mattered. Now in this world where students learn everywhere, they have access to resources from a multitude of sources and they want customized learning. The connection to the students and the parents is becoming increasingly important, but also the connection to the teacher. Teachers, we know from the survey, have one of the greatest impacts on the decision parents make about supplemental learning for students.

Greg: The perfect world is an integrated digital education ecosystem where the formal parts of learning, like degrees, are combined with the less formal parts of education, like mentorship or some of the credentials of varying degrees of maturity. The second connection is the integrated student learning lifecycle, which is connecting the very first lesson someone learns to that very last lesson they have ever learned. And then the third sort of large category of connections is the integrated technology solutions, and those are the ones where you can see clients and you can see education companies making the biggest impact today. Those are the areas where they're actually solving real problems that teachers are experiencing today. So, the area of impact where companies can make the most head way in today are those integrated technology solutions; particularly home to school and how that connection is going to drive the future of ed tech for the next few decades.

Heidi: Well, I was thinking digital natives are becoming digital teachers, do you think that this idea of influencing a student to do summer learning has a lot to do with youth, that as the digital teacher like, okay, they are doing it, I should do it, so what do you think about that Jen?

Jen: I think that might be part of it, digital natives are increasingly becoming young parents, so it could be coming from multiple angles in the sense that if you see that your teacher is very comfortable using digital products and seems really excited about it and your kid uses it in the classroom, there is a high likelihood that you'll trust that person and mention it to your parents and so on. So, they kind of reinforce

each other in that sense. We also saw that, overwhelmingly, teachers who had 10 or fewer years of experience believed that ed. tech would make a big or really big difference in the classroom. And that the number of teachers who have more years of experience believe that the same thing decreases over time.

Heidi: We are going into our final thoughts. I wanted to turn it over to you Mic, what are the key elements for adoption for the end user, what do they need to do to adopt?

Mic: Teachers need to understand how to use the new technology, so training is important and the technology needs to be well integrated into the classroom. So, ed. companies can think about how they can prepare teachers to use their technology and how their offerings integrate with other things that teachers are using. If we think about it from a parent's perspective, again the technology needs to be easy to use. If they are going to be integrating into the learning experience that their child is going through, it needs to be easy for them, and also engaging. And then, we found students like things that are easy to use, fun, and portable. We talked about things being mobile before and how important that is. And then, I think over-arching all of this, is efficacy. The digital classroom isn't going to be the right classroom, if the learning isn't sticking. I think the ability to measure and prove the student's outcome from the learning is really important.

Greg: You need to make sure that you have all of your bases covered; teachers, parents and students at least understanding how they are going to view that piece of technology, that is leaving a massive piece of exposure on your flank. If teachers don't have confidence in how to use it, that tool is not going to be used. If parents, don't understand what benefits it's going to provide for their already over-scheduled kid, chances are they are not going to push their kid that hard to use it. And kids...kids are kids. It has to be engaging enough that the student is going to want to use it outside of school. I mean, think about trying to get kids to eat Brussel sprouts. If the parents never had them do it, chances are those Brussels sprouts are staying on the plate. If you can get those three things working you are creating a pull for your products and not just the classic push that has been the case in education for the last hundred years.

Heidi: Digital education will continue to attract investment, and it's going to be an interesting space to follow. I want to thank, Greg Merchant, Mic Locker and Jennifer Eng for joining me today in discussing digital education. I'm Heidi Rataj and from all of us at User Friendly, thank you.

Greg: Thank you very much. **Mic:** Thank you **Jen:** Thank you so much.