

TRANSCRIPT

Learning Unboxed



Episode #285

David Solomon:

David Solomon:

So, with a system like ours, you can connect all your AV and run it through ours and get that nice even distribution of sound throughout that entire classroom. So, you're not blasting the people up front and the people in back are getting nothing.

Annalies Corbin:

Welcome to Learning Unboxed, a conversation about teaching, learning, and the future of work. I'm your host and Chief Goddess of the PAST Foundation, Annalies Corbin. We know the current model for education is obsolete. It was designed to create fleets of assembly line workers, not the thinkers and problem solvers needed today. We've seen the innovations that are possible within education, and it's our goal to leave the box behind and reimagine what education can look like in your own backyard.

Welcome to Learning Unboxed. As always, I'm excited to talk with another great innovator in the transformative education space. And joining us today is David Solomon, CEO of Lightspeed Technologies. David, welcome to Learning Unboxed.

David Solomon:

Well, thank you very much. It's great to be here.

Annalies Corbin:

We are thrilled to have you. I'm super excited, actually, about this conversation because we're going to be talking about things that we haven't touched on very frequently on Learning Unboxed. But let's set a little bit of context for our listeners as we get started. Lightspeed Technologies is a premier developer of K-12 instructional audio solutions dedicated to creating optimal listening and learning environments for students and for teachers. So, my very first question out of the gate, David, is what in the heck is instructional audio solutions and what does that have to do with sort of day-to-day experiences of K-12 educators?

David Solomon:

Yeah, okay. Well, what we try to do is create that perfect listening environment because if you think about really young learners, let's say like first through third grade, there's all kinds of auditory processing challenges going on, right? It could be ear infections that aren't identified. It could be developmental, just growth and everything hasn't caught up. There are a lot of things impacting them.

So, what we try to do is provide a very low volume, highly intelligible, even distribution of sound throughout the classroom, so every child can hear every word. Regardless of where they're sitting, it sounds like the teacher's five feet away from them. And it's not just a volume issue, it's a clarity issue. You know, we really focus on things like phonemic awareness and how do you improve that accelerated learning in that area.

Annalies Corbin:

I cannot even tell you how much I love this. I have so many questions. This is absolutely amazing because I think we've all been in those classrooms where it's controlled chaos and it's awesome, but there's so much going on that it becomes really, really difficult to navigate. And then, as instructors trying to, sort of, infiltrate that space and not hamper creativity and all those sorts of things, like we've all been in those spaces.

So, I'm super, super curious then, as we think about this, let's start from sort of that educator perspective, right? So, help our listeners really understand why creating these types of environments changes the learning dynamic, or more importantly, I guess, really, the opportunity for teachers to really sort of ensure that the quality of what's happening is being fully taken in. May not be understood, that's a whole nother thing, right? But if we can't even deliver it in such a way that our learners can grab the information, it's going to be problematic.

David Solomon:

Well, just like how it works, maybe we start with that and just get that out of the way. I'm wearing one of the microphones that a teacher would wear. So, pretty small microphone, very lightweight, you forget you're even wearing it. And it's paired with a specialized speaker or set of speakers that, as I said, provides this very clear and evenly distributed sound. We focus on the vocal range so that you can really hear what the teacher's saying or what other students are saying. The research shows that if you can improve the listening environment, if you can improve auditory processing, you can accelerate learning. You can improve the learning performance.

And we started with a school district that really wanted to provide something for hearing-impaired students. What we quickly learned, and what a lot of independent research showed, was that it helps all the children in the classroom. There are all kinds of issues beyond some type of a hearing issue. There could be attention deficit disorders, there could be language issues, there's so many things that are going on in this classroom. So, with this one simple implementation that requires zero professional development, you can have a really big impact on your students.

For the teacher, being able to speak in a normal nurturing voice and having the students hang on to you and what you're saying, we have had many teachers realize that students that they thought were not paying attention had behavioral issues,

maybe learning disabilities, it really came down to they weren't getting through all that noise. And once they had their attention, once the students can really hear, they can get into that learning process.

Annalies Corbin:

Yeah, absolutely. You know, I actually have an experience with this, which is one of the other reasons I was super interested in this when it popped up. My son, who is now in college, so granted this was a long time ago now, his kindergarten teacher, who was amazing, her name was Nina Mingali, amazing kindergarten teacher, but also had the sweetest, softest, most nurturing personality and voice to go along with it. But she wore one of these devices that amplified her voice into that classroom. And it made all the difference in the world.

And I think your point about being able to use our natural voices and not yelling or screaming or feeling like we're somehow having to be above the din makes all the difference in the world. And those kids loved her. She was a great teacher. And I didn't equate it at the time, but I suspect part of it is because she never ever raised her voice to those kids in that classroom.

David Solomon:

Yeah, her real personality could come through, right?

Annalies Corbin:

And it did.

David Solomon:

I think it really does make a difference.

Annalies Corbin:

Yeah.

David Solomon:

A lot of teachers are taught that they need to have a "teacher voice." They need to really put it out there. Well, that's hard on them too. It's not only hard on the students, but it's hard on them. And one of my favorite moments in being... I've been with Lightspeed for 20 years, and when I first joined I had been working mostly with engineers. I did a test of measurement equipment, audio test of measurement equipment, working with engineers. So, this is the first time I'd ever worked with educators.

So, I go to a conference for the first time, and we were giving a workshop, and I thought, "Oh, this is going really well. We should offer to donate a system to the people who attended. Somebody in the audience would win it." Well, we did that and

this teacher comes up to me, she's crying. She is thanking us profusely. She's wanted one of these systems, but the school couldn't afford to buy it. The reason why she wanted it was that she was developing issues with her vocal cords. She was getting nodules on there and she was going to be forced to retire.

Annalies Corbin:

Oh no.

David Solomon:

She did not want to retire. This system allowed her to go back to her teaching style and continue to do what she did best. And it was the first time I had ever had a customer give me a hug, and I think, "Okay, I'm-"

Annalies Corbin:

"I'm in for life now." Yeah, exactly, exactly. All right. Well, let's go to that question about funding and about making this work, right? Because we are all currently living in the United States. I'm going to preface that. In the US, we are experiencing a fundamental existential crisis around funding in schools. So, how do schools manage to be able to get access to these devices? Do you work with them? Are there creative ways, right? Because everybody's talking about school funding in our country.

David Solomon:

Well, the past few months have changed everything. So, what I would have told you six months ago is probably not... like, I can't be quite as sure of myself now as I could have been. I think the most effective way is to plan for it in your bond measures. The local communities do support bond measures. They do support technology that they know make a difference. So, that is the number one way that we can help schools is that we help plan it into their bond measures. Now, that takes two or three years before you even get to that bond of planning, but those are the kinds of things that usually stick. And that's also the way that you can help the most children at one time and get it into your overall school system.

Title I funding has been a good source. It's an interesting one because you can buy something for one or two or three students with that Title I funding, but it will benefit everybody in the classroom. So, there's a lot of leverage down that path.

Foundations at the school level have also been very helpful. When they see something like this that you buy once, it lasts for years, it has a very high impact, and teacher to teacher to teacher can step in and use this equipment without very much training. So, that it turns out to be a good foundation project as well.

Annalies Corbin:

As well, that totally makes sense. What, just out of curiosity, would something like this be allowable or do you even know using Perkins funding, technology funding?

David Solomon:

Well, I don't know.

Annalies Corbin:

Well, look, I tossed out something that's going to send you off to do a little research.

David Solomon:

Yeah.

Annalies Corbin:

There we go. I love it, right? Okay. So, the answer is maybe, right? Because Perkins funding lets us purchase technology. So, I would be super curious whether or not it would be allowable. I suspect it might be. So, that would be super-

David Solomon:

I'll find out and let you know.

Annalies Corbin:

... super intriguing too. All right. So, then, one of my other burning questions with this, and I often wondered about this in the example I gave of my son's kindergarten classroom, right? So if one teacher in a classroom has this technology, and the teacher in the classroom next door or across the hall does not, is there substantial bleed over or is the sound contained in the space where we want it to function?

David Solomon:

That's a really good thing to think about. As designed, there's no bleed over, right? We want it to be low volume. Like, when a teacher is wearing this microphone, the teacher should not be able to hear themselves amplified. You want to get that volume down to a level that is, "Oh my gosh, I can hear it. Well, that's too loud." And if you set it too loud, yes, you get bleed through the ceilings. But if you put it at the low volume that it really needs to be, no, you won't get that bleed over. It'll stay in the classroom.

Annalies Corbin:

Spectacular technology, yeah.

David Solomon:

It really is.

Annalies Corbin:

Yeah, absolutely. So, speaking of technology... and I just love technology, so these

conversations are always a lot of fun. But talk to us a little bit about thinking about this type of technology and the other types of technologies that we employ in our schools, whether here or other parts of the world.

And how do we, as school administrators and planners, or even district personnel, right, really think about this as part of more of an ecosystems approach of the technology that we're going to deploy to make our school and our teaching and learning environments better, more robust, not rote, all of those sorts of things. Because I would assume that if we're stepping back and saying, "We need to make modifications to our overall technology infrastructure and plan," that this kind of technology and recognizing how this is beneficial to the actual learning environments for all involved would be a really powerful thing to think about in our planning.

David Solomon:

Well, I think one of the things that I really like about what we have to offer is that audio is everywhere. So, you have this system that can integrate with multiple technologies. You know, you buy the flat screen, we can integrate with that. Your computers, you can integrate with that. Anywhere, your PA systems, your security systems, there's everything that has audio within the classroom, we can connect to and make those investments just that much better.

Annalies Corbin:

Okay, timeout. That's super awesome. Help me really understand that. So you use the example of the computers in the classroom. Talk me through that. So what does that mean that this technology integrates with that? Because that's super cool. I love this.

David Solomon:

Well, you don't have to have... sometimes, you have these speakers on. Let's say you have a screen behind the teacher. You have two speakers on either end. Where is that sound going? That sound is going about 10 feet into the classroom. So, you are probably at the second row or the second group of tables, right? What about everybody in the back? It's the same problem.

So, with a system like ours, you can connect all your AV and run it through ours and get that nice even distribution of sound throughout that entire classroom, so you're not blasting the people up front and the people in back are getting nothing.

Annalies Corbin:

So, you can ditch those two speakers on either side of the screen and instead use the system that's been deployed?

David Solomon:

That's right, which is often just one speaker up in the ceiling, disappeared, nobody

sees it, the sound just comes out and everybody can hear. It also makes it so the teacher has a lot more control. They can interrupt the audio, they can stop, comment, they have control over the space, they don't have to run over to the computer and turn the sound down or things like that.

We have the systems connected to your paging system, so that if a page comes over, it can override all the other audio in the classroom, so you hear the page immediately. We also have integrated into security systems, so that there is an emergency button on the microphone. You press that emergency. Now, they know there's a problem in that classroom. They know which classroom and they know where to go.

The next step of what we have is that we're integrated into your phone systems. So, you can open up, the teacher can open up a two-way line of communication with a first responder, the office, district administrator, however the district sets that up or the school sets it up. So, we're not just working with instruction, but we're also working with the broader communication throughout the school.

Annalies Corbin:

Wow.

David Solomon:

And that's all just right here with the teacher all the time.

Annalies Corbin:

That's pretty remarkable. Okay. So, now, we're gonna be sort of forced to change direction slightly because what's really clear to me here, David, is we're talking about a company that is really innovative. And you've got to be working on an ongoing and regular basis around making these systems better. So, let's talk a little bit about innovation in the ed tech space because honestly it's running fast and furious and it's everywhere.

So, what are the key priorities? What are the things that as a company that you feel like are super, super important or valuable for you as a company to really spend time, energy, and effort thinking about as those next innovative pieces that are going to be meaningful in those learning environments?

David Solomon:

I'd say, number one, what is a classroom? How is that changing? We went through a lot in the pandemic and our systems were very useful during that period because the number one problem with remote learning was audio quality. And we were able to come in and solve that problem pretty quickly but it also gave us the picture. It's like, "Okay, classrooms are gonna take on all different kinds of definition and how do we fit into that?"

So, we have a product called Activate that is designed for supporting small group instruction, where the teacher can actually listen in to multiple groups and be where they need to be at the right time, or hear what's going on in the different groups, quickly pull out and move into whole group instruction when needed, then go back to the small group instruction.

So, we're finding ways to adapt to how teaching has happened. I imagine in some of your STEM labs, there's a lot of group work where you don't necessarily want the teacher to step right into it. Sometimes, you do. But sometimes, you want to observe so that that group is on their own. But you're listening for understanding, you're listening for opportunities to further educate, you're listening for success points.

We have one teacher that is using this particular Activate system, and she was talking about a student who, year-to-year, was a problem student and the teachers would tell the next year's, "Hey, watch out for this one. This is a difficult one." Well, she was very committed to working with this student, and she was listening in with our system to something, and she heard him be very articulate on a problem. So, she went over and said, "Hey, I heard this. Would you like to share with the class?"

He, right from his chair with the microphone in front of him on the table, just started talking about the problem that he was solving. And she said from that point on, their relationship changed because she caught him doing something right and was able to reward him for that in the moment.

Annalies Corbin:

She gave him agency in real time and I want to celebrate that teacher.

David Solomon:

Isn't that awesome?

Annalies Corbin:

Yeah.

David Solomon:

Yeah.

Annalies Corbin:

So awesome.

David Solomon:

So, we look for things like that. Also, in this area of broader communication, if you have everybody in the building wearing a communication device, that you don't have to scroll through a phone to find an app, you don't have to look for a phone number,

you can just make immediate contact, what kind of impact can that have on a campus?

So, we're looking into those areas, but also looking for, where is the classroom? There's a lot more outside and how do we participate in that? The remote learning, how do we participate in that? But the consistent theme is there's audio everywhere, it's the primary way that we teach. For younger children, almost all their learning comes through here. So, how do we make sure that they're getting what they need?

I think another area that we can really make a difference in is English language learners. So, English for people where that is not their first language, when you put these systems in the classroom, it has an immediate impact. I don't know if you've ever had the experience of trying to learn another language but it all seems so fast. Well, part of that is all the other noise that's interfering. So, how do we cut through that? So, that's another area that we want to focus on and see how we can have an impact.

Annalies Corbin:

Yeah, I really love all of these. And I echo your statement about, where is the classroom? We absolutely, at PAST, advocate for this idea of linking learning to life. And for us, what that means is learning happens all the time everywhere. Well, if that's the case, then literally the walls should no longer be my primary default. So, how do we take your technologies and we make them portable, usable, in the moment, with just me and a bunch of kids, and I'm out on the street, or I'm out in a field, or I'm in a city park, or I'm hiking through the woods, how do we accomplish that?

So, I appreciate so much that you're thinking about those elements as well because I strongly hope and I believe that we are moving more and more towards this idea that the entire community is the school.

David Solomon:

Yeah, I love that about your mission, and reading about it on your site on how important the community is to the learning, and the practical and the theoretical, how they go together because, so often, so much of my own learning has been theory before I went to work. And then, my learning was very practical. It's also very rewarding right because you see the impact, "Oh, if I learn how to do this, this is what happens," as opposed to somebody telling you something that could happen.

Annalies Corbin:

Right, right. And I guess the other thing that I love about it, and I think that, again, this is where technology plays this key role in helping us do more and more of this, is the idea that I can learn not just things I don't know but from the educator side of it, I don't need to be the expert in whatever that thing is. I may be the English teacher, or I

may be the math teacher, or the science teacher, or so on and so forth, that may be the hat I was hired to wear, but the reality is the way our kids today are so technology integrated, they are almost growing up and embodying this idea that all knowledge and content is interwoven because that's how it's delivered to them in the world that they're experiencing outside of a traditional school setting.

If that's the case then, we have to be open and willing to recognize that our kids may want to explore ideas and topics under some umbrella we need to teach. But I have no idea what that content is about or no idea what the answers are or even what the right questions would be. But how can technology, my use of technology and my integration of technologies in my classroom help me get comfortable? So, I can envision that if I know that I'm communicating well with my students, they can hear me, I can interact with them, I'm able to monitor what's happening in a meaningful and tangible way, it takes off the pressure of having to be the sage on that stage.

David Solomon:

For sure. And yet at the same time, it gives that teacher a highly leveraged role in the learning process, right? It's a higher leverage. You're really guiding people and looking for opportunities to help them grow in that situation as opposed to just that outright lecture.

I think something that I really love about representing our product as a technology piece is that it's a technology piece that does not discount the human element. I feel like so much of what we are experiencing in technology is all about, "Well, you could reduce the amount of teachers you have to have," or "You don't have to have conversations. We can set this up so that it can be self-learning." And I'm saying that in such a way, it probably doesn't sound like I think it's good, but I think there's value in it, but I don't want to lose the community.

Annalies Corbin:

A hundred percent.

David Solomon:

The community of the school, the community, the classroom, that connection with the teacher, the part of that teaching is teaching the students how to learn from each other and you know how to learn together. So, I love that we and our product is a part of that and making that human element much more effective.

Annalies Corbin:

Absolutely, absolutely. You know, as I think about the fact that folks are listening to this conversation from a variety of places all over the world, and their circumstances are very different, the environments they're working in, very different, the rules that they're working under are all very different. I'm super curious, David, what keeps you

up at night? What are you thinking about as this great problem that we need to solve in the world of education that you feel like you could contribute to?

David Solomon:

Well, it does bother me quite a bit about what is happening and is there going to be some instability in public education because of what's going on. And while you can always see room for improvement, I mean, everybody is always working to do that. It's hard to see where this is going.

So, I have to say that I think I'm like everybody else where that does keep me up at night. I don't know what I could do about that. So, the last part of your question, if we bring it back to what we can control, right now, as far as the speech intelligibility and the instructional part of our product, it is excellent. To improve it any more, I don't know what you could do. But to improve the communication on a campus for a variety of reasons is something that we care a lot about. And how do we make that really easy?

Because more and more, it's not just the teacher in the classroom. There's a lot of other people involved. And it's not just in a crisis moment. It could be all kinds of things that need instant, immediate, easy communication. So, that's an area that we are looking at to try to help with.

Annalies Corbin:

Including all the wonderful things that are happening, right? And there are so many wonderful moments in any given classroom on any given day.

David Solomon:

Well, you spend a lot of time in schools, I'm sure, and I do, and I see a lot of good. It's pretty rare where I walk into a classroom, and I'm not just impressed with the teacher, impressed with the kids, and what they're learning and how they're going about it. So, you're right, there is a lot to celebrate.

Annalies Corbin:

Yeah, absolutely a lot to celebrate. So, as we wrap this conversation, for those educators that have been listening and they're out there and they're wondering, "Oh my goodness this is really really remarkable," so how... and we will put into the show notes links to all those pieces and parts so that folks will be able to find you, reach out. But I guess I'm asking the bigger question because we know that technology and technology integrations and plannings and schools, it's a big effort. It often is a conversation that is not at the classroom level. It's much bigger than that. What are the high-level bullet points that an educator that's listening to this conversation can rush out to their principal, or their facilities folks, or their superintendent and say, "We need this and this is why"?

David Solomon:

You know, you could start with all the research and all these, but that's not what people need to hear. I think one, you come out and you say, "I found a technology that will serve all the students in my classroom, will last for many years as a one-time buy, and I think it will improve the learning in my classroom without changing anything else." So, just from your baseline, we can see an improvement.

Now, then you can go into the why, We talked about that already. We have a lot of children that have hearing issues, have attention issues, have language issues and a system like this can help with all that. It also can... if you're talking to an administrator, it's like something like this can reduce absenteeism, teacher absenteeism because they will not be out at the beginning and the end of the year with vocal issues, with throat damage.

I think there's a lot of reasons to put something like this in place, but it's just really simple. It makes an impact. And the best way to experience that is to have one of our demo systems put in a classroom, leave it in there for a couple of days, and I promise you the teachers and the students will not want to take it out.

Annalies Corbin:

Oh, I bet. I have no doubt. No doubt whatsoever. David, thank you so much for taking time out of your day to join us, to have this conversation with us. And again, we will make sure that we have all the information about Lightspeed Technologies in the show notes, links, and the ability for you to reach out to David and his team for any information that you may need. But we are so grateful for the work that you're doing and for taking time to join us today.

David Solomon:

Well, thank you. I really appreciate it.

Annalies Corbin:

Oh, absolutely. Yes, thank you so much for being on Learning Unboxed.

Thank you for joining us for Learning Unboxed, a conversation about teaching, learning, and the future of work. I want to thank my guests and encourage you all to be part of the conversation. Meet me on social media, @AnnaliesCorbin, and join me next time as we stand up, step back, and lean in to reimagine education.