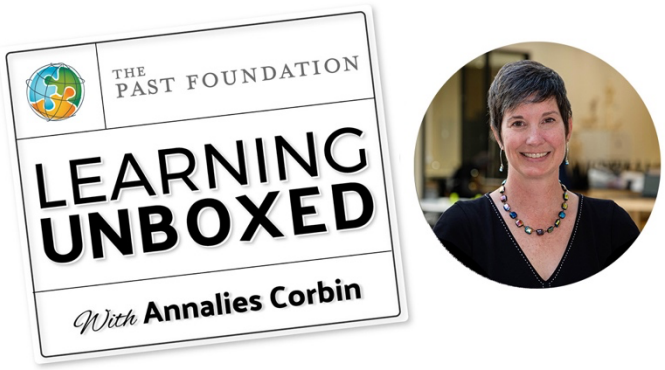

Lisa Chambers

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Annalies Corbin: [00:00:15] Welcome to Learning Unboxed, a conversation about teaching, learning, and the future of work. This is Annalies Corbin, Chief Goddess of the PAST Foundation and your host. We hear frequently that the global education system is broken. In fact, we spend billions of dollars trying to fix something that's actually not broken at all, but rather irrelevant. It's obsolete. A hundred years ago, it functioned fine. So, let's talk about how we reimagine, rethink, and redesign our educational system.

Annalies Corbin: [00:00:50] So, welcome to today's episode of Learning Unboxed. I am super excited, as always, because we have a great guest today. We are going to be talking with Lisa Chambers of TECH CORPS About the role of technology in K-12 education, the status at the moment, the view for the future, and sort of what we can expect and be planning on. And just a little bit of background about Lisa.

Annalies Corbin: [00:01:16] She has more than 20 years of experience in building cross-sector strategic alliances and developing nationally recognized and award-winning computer science and information technology programs specifically in that K-12 space, which is why we're so excited to be speaking with Lisa today. And in 1999, she was the state director for Ohio's chapter of TECH CORPS, and then in 2011, she was named the TECH CORPS National Executive Director. So, Lisa, thank you for joining the program.

Lisa Chambers: [00:01:50] Thanks for having me.

Annalies Corbin: [00:01:51] So, first and foremost, to give a little bit of context to our listeners, out of full fairness, I've known Lisa for many years now. We bump into each other, have great opportunities to get to do some planning and some programming work together. And we're involved with a lot of the same partners, and schools, and spaces. And so, I'm super excited to have this conversation today, because TECH CORPS is a program that, at PAST, we view highly favorable. And in fact, we recommend it frequently. And so, it's a great conversation to be able to have. So, for our listeners, Lisa, who come to us from all over the world, who are not going to be familiar with what TECH CORPS is, give us the 100,000-foot view of this organization. You noticed I went all the way to the very top.

Lisa Chambers: [00:02:38] Well, I think our founders would say, Gary Beach, who founded TECH CORPS back in 1995, his original vision of TECH CORPS was almost like a high-tech peace corps. So, when Gary launched TECH CORPS back in the mid-'90s, if you think back to where we were with technology and education at that time, that was early on, right? I mean, things were really just starting to think about how to

integrate technology into the teaching and learning process, what to do with this new thing that we call the World Wide Web, right?

Annalies Corbin: [00:03:17] Yes.

Lisa Chambers: [00:03:18] And so, Gary thought, wouldn't it be cool if we could figure out a way of connecting technology professionals with schools in their community to lend a hand, and to lend a hand in whatever way made sense, Annalies. And so, early on, TECH CORPS volunteers could spend a weekend wiring school buildings when we were still using wire. Oh, we're setting up some of the first computer labs in elementary schools. And so, if you fast forward, we have evolved as the spaces evolved. And so, now, I'd like to say, we do two things.

Lisa Chambers: [00:04:00] We still engage technology professionals who go out into their community and teach kids about technology, computer science. The difference now is that we give them kind of a roadmap, right? We help them think about, well, how do you teach coding to a third grader? So, we give them a TECH CORPS program to go out and implement. So, we still have kind of that piece of the volunteers. And then, we're constantly developing computer science and technology programs for kids. And that can be anything from just a short kind of awareness program, right?

Annalies Corbin: [00:04:45] Right.

Lisa Chambers: [00:04:46] So, that might be a four-hour robotics workshop with a group of Girl Scouts on a Saturday all the way up to a deep immersion program, which we do with our high school kids, where we may have them for 200 or 300 hours in a program. And they're walking out with either an industry-recognized credential or college credit. So, yeah.

Annalies Corbin: [00:05:08] So awesome. And I guess I did not realize that the origin story was around the infrastructure of just launching technologies in school. So, I appreciate that very much, because I did not realize that piece of the TECH CORPS back story. I'm familiar with what I see and how PAST has worked with you over the years, which is really on the student programming side. And so, I'm very familiar with that aspect of it in the volunteers coming in, but didn't really have a good sense of the fact that back in the day, you would roll up your sleeves, and let's actually wire this place, let's build this lab, not just the teaching and learning part, but the infrastructure piece as well.

Lisa Chambers: [00:05:50] Yeah. I was just sharing with one of my colleagues that one of our early programs was a program called Web Teacher, and John Glenn actually was the narrator. And at the beginning of that video, and again, it was teaching teachers about how to use the internet in your classroom. And he described the internet using language that years ago was used to describe the chalkboard when the chalkboard first entered the classroom. And I thought, isn't that the truth? Right? And who would imagine, back in the '90s, when we were just starting to think about this, who would imagine that we'd be where we are today?

Annalies Corbin: [00:06:29] Right. Yeah.

Lisa Chambers: [00:06:31] And so, so much exciting stuff going on, but still so much more work to do as you know so well.

Annalies Corbin: [00:06:38] Isn't that the truth of it? Right? Because I've had some really fun conversations with our kiddos at PAST, a lot of the robotics kids in particular, who will ask poetically about the things that they do. And they always start these conversations, and I'm sure you're familiar with this, well, you know our

generation, as if the rest of us are so clueless, for starters. I love that. Every time I hear that, I just want to shake my head.

Annalies Corbin: [00:07:02] But I have pointed out to them that I am, in fact, old enough that I remember the first computer coming to somebody's home. I remember one of those Texas Instruments computers with a tape drive, right? I vividly remember my grandpa, who was born in 1913, thought that was the coolest thing ever. And he went out, and bought one, and brought it home to us, right? So, just like a crazy thing.

Annalies Corbin: [00:07:32] And I remember the first computer lab in my school when I was in middle school, and I remember the first computer science courses coming to a school district, and you had to go into a lottery to be able to get to be in the class, because they were only going to teach like one class of it. And now, it's perceived to be as not just a great opportunity, but almost even, and I totally approve this in many ways, a foundational sort of right, you have to have knowledge of the internet, technology, coding, computer science to be fully literate.

Annalies Corbin: [00:08:10] So, the world has, in fact, changed. And so, Lisa, how do you—there's still—let me pause again, circle back around. With everything that's going on with a pandemic, and we'll get into some of the weeds of how that's affected a lot of your work over the last year or so, but it has also brought up a tremendous amount of inequities tied to technology, in particular, in our education space.

Annalies Corbin: [00:08:35] And so, as you think about tech coursework, not just in the pandemic or even in the past, and in the moment, but in the future, what is the role? Because I assume that there is a role for TECH CORPS as it relates to sort of thinking about those inequities and the opportunity that has been brought forward because of all of this as we move forward. What does that look like?

Lisa Chambers: [00:08:59] Absolutely. And I was just having this conversation a couple weeks ago with the former national director. She was thinking back about, gosh, when she started, we were talking about the digital divide, and here we are today, still talking about it. And while there's been a lot of progress in some ways, there hasn't been in too many ways. And some of those inequities that we saw back in the '90s, we're still experiencing now. And I feel like it's more crucial now, right? Because there's so much that you have to do online.

Annalies Corbin: [00:09:47] Everything. Almost everything, right? And the things we can't do are kind of mind-boggling, because we can actually physically do them, there's just policy that says we cannot, which is confusing, too, right?

Lisa Chambers: [00:10:01] Yeah. And we know that other countries have figured this out. And so, I think part of it is just us making a commitment that this is something that is a basic skill, and that all kids, all families, regardless of where they live, that they should have access and exposure. And we just know that that still is not the truth. And so, I think for an organization like ours, that's why it's even more important for us to really raise that flag and raise our voices around this.

Lisa Chambers: [00:10:37] And we have been doing that work prior to the pandemic. I really had a deep feeling that all kids, regardless of their race, regardless of their gender, their zip code, where their parents work, that they should have access to high-quality computer science programs. And that's just not true, right? In a lot of ways, I think we thought once we bought hardware, that we had solved the issue.

Lisa Chambers: [00:11:05] But now, what we know is that you can walk into a great computer lab and they're using it to teach typing or they're doing drill and kill to prep for the test. They're not teaching computer science,

they're not teaching the skills that we know kiddos need to be successful, regardless of what they decide to do. And so, I think for us, we want to draw that attention, because a lot of parents I talked to, they were surprised.

Lisa Chambers: [00:11:37] They thought, I guess, when I went in and I saw that lab, that I just thought that they were using it for more than they were. And so, now, I'm often saying to folks, ask the question, no, yeah, it's a great space, but what are we doing here? And are we teaching our kids to become creators and designers or are we just pushing them through practicing for the test? And so, I think those are the questions that we want to make sure that folks are asking and that we're thinking about, and understanding that this really is a global issue for us, right?

Lisa Chambers: [00:12:18] I mean, that if we're not preparing all kids, if we're not bringing diverse thoughts and ideas to the table, that it's going to affect our competitiveness as a nation. And right now, we're not doing it as we should be. I mean, we know that women make up more than 50% of the workforce, they're 26% of the IT profession. When you drill that down even further, let's talk about Black women, 3%. I mean, think about all of the talent, all of the ideas, all of the innovations and the solutions that aren't here, because we're not in the room.

Annalies Corbin: [00:12:56] Right. Because we're not putting them on the table. We're not even making it part of our conversation, yeah.

Lisa Chambers: [00:13:01] And it's not lack of talent, it's lack of opportunity. And so, I think for us as an organization, that's why while we work with all kids, we do make a commitment to making sure that we're getting to those kids who may not have access to these types of programs during the school day, or may not live in communities, or have a parent who understands the importance of sending their child to a STEM camp in the summer or even has the resources to do that. And so, we do really say, we want to make sure that we're getting to those kids, because the talent is there, we just have to provide them access and invite them in, right?

Annalies Corbin: [00:13:44] Right. And show them once we've provided the access and invited them in, that it's not just a viable career opportunity, but it's something that they can tap into their own passions and turn into a career. And you and I had been involved in these conversations many times before around the fact that you can't be what you can't see, but you can't do what you don't know, right? And so, we have to think about this problem extremely holistically and make sure that the opportunity is more than just a time and a place, that it incorporates all these other components.

Annalies Corbin: [00:14:20] So, I want to dig into that just a little bit, because the work that you're doing in the informal sort of after-school setting and you guys do a lot of that, but you're also doing some pretty specific work inside the school day at districts, whether it's professional development, just getting folks comfortable. Back to that statement that you made earlier, which I truly, fully appreciated, you walk into these labs, and whole and behold, we're only teaching, typing, or we're teaching to the test. And that's not because the facility is not capable, it's because the instructional opportunity is not there for a variety of reasons, right?

Annalies Corbin: [00:14:58] A teacher is not comfortable. The teacher didn't have the right training. The school's not really pushing that agenda, a whole host of things. So, I want to talk a little bit about the nuts and bolts about how you change the paradigm around making sure the opportunity exists within the school structure. It's a whole another endeavor to try to get people in the after school and summer space. As we know, that's also a huge lift. But we have this captive audience, so to speak, during the day. So, how do we change the tide in that moment, Lisa?

Lisa Chambers: [00:15:31] So, this last year, year before, we headed up a project here in partnership with the Teaching and Learning Collaborative that really looked at computer science ecosystems. And one of the things that we decided we wanted to do was to commission a landscape study, if you will, to see what does computer science look like, where there's access, who's teaching, where they're teaching.

Lisa Chambers: [00:15:59] And so, we focused on the 11 counties kind of that what we refer here to as Central Ohio, and sent out a teacher survey, and a couple of things, Annalies, that I'm sure you won't find surprising, but again, I think when we think about the work that needs to be done, one of the biggest barriers was the lack of professional development for teachers in the area of computer science. And as you can imagine, that lack of access was greater for teachers at those earlier grade levels, right?

Annalies Corbin: [00:16:34] Sure.

Lisa Chambers: [00:16:34] Because even in this country, and this is kind of across the board in the United States where we are teaching computer science, it's traditionally at the high school level. The challenge about that is that the research tells us that if we don't engage girls, and Black and Brown students by elementary school, even if they attend a school district where there is a computer science option in high school, the likelihood that they're in that course is less, right? And you can walk into, I think, many computer science high school classrooms and you'll see that it looks very much like the tech industry looks, right?

Annalies Corbin: [00:17:12] Yeah, absolutely.

Lisa Chambers: [00:17:13] So, our partner with the Teaching and Learning Collaborative, and I know you know them well, but the work that they do around professional development with teachers is just outstanding. And so, a number of years ago, our two organizations joined, and said, we want to do some work together as it pertains to computer science. And so, we applied for a mathematics, science partnership grant.

Annalies Corbin: [00:17:39] An MSP, yeah.

Lisa Chambers: [00:17:41] There were a couple of things that we thought about, so we really want to think about teachers in these lower grade levels, right? Like where is that first drop-off point for kids? Let's focus there, because there's a lot of great curriculum out there for the higher grade levels. And then, we thought, okay, what's the challenge of teaching computer science in elementary school? One, you've got one teacher who's a generalist, who teaches everything.

Lisa Chambers: [00:18:11] And so, like, okay, then how do we make it easy for our teachers to integrate computer science? Well, what if it's tied to? What if it's not an addition? What if it's not one more thing? But what if we look at what they already need to teach and focus on, and say, let's think about, how could we integrate there? And so, we decided to focus on mathematics, which I also think, when you're talking about computer science, you get kids who are excited about CS, but if they don't have a strong math foundation, they're going to hit a wall.

Lisa Chambers: [00:18:47] And so, we need to power them up in both areas. And so, this curriculum that we ended up and developed really look at, what were some of the areas that kids were struggling in as it pertains to mathematics? And could we use computer science concepts to make it a little bit more exciting to think about some of these math concepts in a different way? And so, there, we launched this program that we now call E4Tech. And so, with MSP grants, they're research grants, right? So, we wanted to look at increasing teacher's content knowledge in the areas of math and computer science, and then the same for our kiddos.

Lisa Chambers: [00:19:33] And what I can say is that at that end of that project that we saw statistically significant gains in the math scores of the kiddos whose teachers had gone through this program. And we had teachers saying things like, really, what you taught me was differently about how I was teaching, how I was approaching math. And they appreciated that they didn't have to make the case for why they needed to also teach computer science. It was just saying to them, you've been using this to teach this math concept, now, instead, you can use this.

Lisa Chambers: [00:20:13] And one of the things we also had to do and we learn along the way is we had to develop look force for our administrators so that they understood when they walked into the classroom that it might look a little different than what they were used to seeing, but that there was a connection, and it tied back to the standards for math, and we would get the kids there. And I think we were just blown away with what these teachers were able to do and how it was able to transform, how they thought and thought about mathematics and computer science. And to hear teachers saying, my kids were running in, and saying, is it E4Tech day? Is it E4Tech day? Which, really, they were saying, is it math day? Right?

Annalies Corbin: [00:21:05] Yeah.

Lisa Chambers: [00:21:06] And that's exactly what we wanted them to do. So, that's the really exciting work to think about, how do we make sure that more kids and more teachers in the state have access to programs like that? And we're still trying to figure that out.

Annalies Corbin: [00:21:23] Yeah. I think we all are, right? But I do love and truly, truly appreciate the fact that, as a group, as an effort through that grant opportunity that you chose mathematics. I mean, that is certainly one of the things that has been an area of research at PAST that we have focused on for a number of years, the sort of realization and revelation, I guess, if you will, that there's so much work that's happening in literacies, and reading, and writing are super important. No one is arguing or debating that, whatsoever. But what we have found over time has been, and the data supports it, is that if we only focus on reading and writing, math scores do not improve.

Annalies Corbin: [00:22:04] But the converse is also not true in the sense that if we focus on mathematics as the primary driver for all literacies, all literacies improve. And so, the fact that you're tying math and computer science back across the standards of the work that they're happening, it's only going to make everything go up. And although that may not have been what you measured through your MSP, that is so, so critically important. I love that you went that direction. And so, my follow-up question is, okay, you did that thing, so what's next? What do you do with this now?

Lisa Chambers: [00:22:41] Well, I think that we think about, because as you know, MSP went away as a program, so we're going to take it to the National Science Foundation and hope we can get some support there. But we're also looking at even some private funders as well. So, we've been doing some work up in Cleveland that is privately funded and wants to continue to build that out. We've also started to put some of the lessons are out there, but as you know, I think more than the curriculum is the professional development then goes with it, right?

Lisa Chambers: [00:23:18] I mean, that's the key part. So, we can put a lesson out, but I think unless you give those teachers kind of that PD and that support that they need, I don't know that it had the same punch with everybody. But again, I think we've got to keep talking about the importance, and I know that you went through the process here when our state was going through focusing on the launch of the computer science standards and conversation that was there, and there are still just a lot of confusion in this area, right?

Annalies Corbin: [00:23:52] Really.

Lisa Chambers: [00:23:52] So, I think for those of us that work in this space, that has become yet another bullet point on our job descriptions, I think, is to just assure that our legislators and our communities really understand what we're talking about when we're talking about computer science and why it's important, and beyond just—because I think we often default to the workforce.

Lisa Chambers: [00:24:21] And I think it's bigger than that. And so, I think it's important that we continue to have those conversations with folks and not just assume because everybody is looking around with a smartphone that they get it in the same way that I'm sure your parents say, oh, yeah, my kids have been playing with an iPad since they were two years old. Well, that is, I think, the mode developer also.

Annalies Corbin: [00:24:48] Right. Yeah. We need to get to the point where folks think about more than just, I have this thing, but that I know how—and more than I know how to use this thing, I actually know how to leverage this thing, which you're never going to be able to do if you can't program code or at least understand the language that makes the tech possible and the way the tech works in your everyday life.

Lisa Chambers: [00:25:10] Yeah. And I mean, I think when we think about the AI, I don't know if you've seen Coded Bias yet, but I mean, we've got to understand this world that we live in and we've got to make sure that we really are critical thinkers about what we're giving access to and what we're inviting into our spaces and our places, and how it's controlled. And I just want something else, I can't remember what the name of it was, it was another movie about this whole piece with AI, and I thought of taking it back to my team to say, you know what, I want to develop a camp for high school kids where we start talking about this. Because they're going to be the ones that really can start to ask some hard questions about what we're doing, and what we're allowing, and figuring out, and what do we do about it?

Annalies Corbin: [00:26:07] Yeah. So, let's go back to that conversation earlier about my generation. Okay. Great. Awesome. Then, you can be the empowered generation, you go and solve these issues, but if you don't understand the breadth and depth of what the issues really are, you're never going to be able to embrace that my generation approach, and say, I'm going to solve this thing, right? So, when we think about equity and we think about the environment, we think about some really key things that this group of baby millennials or our Gen Z'ers and our Alphas that are coming up very quickly right behind them, they've got some they've got something to launch on to, right?

Annalies Corbin: [00:26:46] And they can, in fact, solve those problems if we allow them. I want to talk just a little bit, sort of, Lisa, about one of the other pieces that you mentioned. And I just want to be really clear, because I think that this is sort of a global conversation that I'm hearing and seeing snippets about, as it relates to sort of the how and when we engage students differently, especially thinking about computer science.

Annalies Corbin: [00:27:13] And so, sort of my own internal musing, which may be completely wrong and feel free to say, oh, no, Annalies, that's BS, that's OK. But I imagine and envision a day where we can stop having the conversation that is around, does your school teach computer science, and more of, is computer science embedded in everything you do? How do we get there? And is that where we want to go?

Lisa Chambers: [00:27:39] Yeah, I don't know. I don't know, because what I'd be concerned about is that depending on where we were, that that would get watered down.

Annalies Corbin: [00:27:50] Yeah, diluted. That's always the fear.

Lisa Chambers: [00:27:52] Right?

Annalies Corbin: [00:27:52] Yeah.

Lisa Chambers: [00:27:53] Yeah. So, yeah, good question. I'm not sure. I don't know, because it's the same—I mean, I think that the conversation over the last couple of years that's been bubbling up is conversation around confrontational thinking. Well, shouldn't we be doing that everywhere? Now, we do that everywhere. Well, maybe we do, but maybe we don't, maybe we don't do it as well in some places as others.

Lisa Chambers: [00:28:21] And so, I think that kind of just going to the equity piece of it is I want to be careful and I want to really think through, because I do want, in the same way that we thought we could buy these two boxes, these two computers, and we drop them into two different classrooms, and it seemed like it was the same thing, and it seemed like it would be equitable, but we know now that it wasn't, right?

Annalies Corbin: [00:28:55] Correct.

Lisa Chambers: [00:28:56] That they were used in different ways, and that a lot of time, that tracked to where they were situated. So, I don't know, Annalies, I'm going to think more about that.

Annalies Corbin: [00:29:11] I don't know the answer either, but it is one of the things that I just really, really wrestle with. And when I think about it in particular, and so as we are getting ready to have our our first summer post-pandemic with kids actually in the house with their hands-on machines, devices, outside, inside, you name it, it just brings that question back to me around how we normalize the expectation, that all kids, back to your point, can program. They can think. They're design thinkers. They're problem solvers.

Annalies Corbin: [00:29:49] And they understand and leverage the tools that they have, but they understand them as tools to move them into another place, right? And that's an even sort of bigger leap in many cases, especially when you think about the way our K-12, certainly, in the US, but other parts of the world as well, are really, really wrestling with how best to not just get kids what they need to move on and persist and be successful, but also, what they need to be great global citizens, to be stewards of our planet, to be compassionate, empathetic individuals, and to lead their lives through some sort of passion, that there should be more out there for us than just the thing we do for the sake of doing it.

Lisa Chambers: [00:30:39] Yeah. And I think I'm going to add on to that, and say that I think that's the one piece about this informal education space that really excites me. And I was sharing with a colleague earlier today that the young woman in our program, in one of our high school programs one year, and she turned out, she was just like a rock star. I mean, she just was awesome. And so, I was standing there one day, and I talked to her, and I was like, what other technology classes have you taken?

Lisa Chambers: [00:31:13] And she was like, none. And I was like, are you serious? I said, why not, and you seem to be so excited about it? She's like, yeah. She was like, but I was scared, because I didn't want to take a class, and not be good at it, and then it would impact my GPA. And I had never thought about that, that in these informal spaces, it gives kids a chance to try something, right? And there's so much pressure on our kids today, so much pressure to not fail, to always get the right answer.

Lisa Chambers: [00:31:46] But in these informal spaces, you really can say, well, I don't know, right? And here, she's learned that not only did she like it, but she was really good, and ended up, and went to major in computer science, but I thought, that's such an important role for us to play, is providing those spaces, and then encouraging our kids to take that chance, to try something new. And with the kids that come through our

programs, I don't think that they'll all grow up to become software engineers or data analyst, but I hope that they'll make a more informed decision about what they like, and what they don't, and what they might want to be or not, and not just say, I'm not into that, without ever even trying.

Annalies Corbin: [00:32:44] Exactly. I completely agree with you. I mean, I think that's the great value add that PAST has is our afterschool and summer programs, we've put a tremendous amount of emphasis on them, because back to your point, we have kids for a whole host of reasons who will come and spend six or eight weeks with us just going from program to program to program to program week after week after week after week, and I had somebody asked me one time, well, isn't that parenthetical to what you're hoping for?

Annalies Corbin: [00:33:14] And my thought was, no, it's exactly what I'm hoping for, because it's my hope that somewhere in that six to eight-week journey, that kid will find the thing that makes them go, wow. And then, we have them, right? Now, they're ours to nurture and to help them grow into whatever that thing is, but the flip side of it is they've learned about all the things they don't want to do.

Lisa Chambers: [00:33:38] Yeah. And I bet the same is true for you as me, how many adults have I run into who have told me, who will work in this space, and I'm like, how did you get into tech? And it was, I was at a camp or it was in an afterschool program. I mean, I'm sure there's also some that are saying, oh, I took class in school, but a lot of times, it was something informal that they did, that they kind of just landed in like, wait a minute, what?

Annalies Corbin: [00:34:07] Yeah. And if we can make it possible so that that informal space can bridge that gap, to your point about the young high school woman who was not willing to, because it could prove detrimental to her, and her ongoing future and experience to be able to take that leap, to try that thing that might be a little bit different. So, I appreciate that very much.

Annalies Corbin: [00:34:31] And the other thing is I think helping the world understand that the informal space is also a great space to earn additional credit, if necessary, and the opportunity exists, to get those industry-stackable certs, again, not because we're trying to push people into careers, but we're trying to help people earn credentials that makes sense for them, that they're excited about, that might make their journey a little bit easier further down the road and a whole host of other pieces sort of in that mix.

Annalies Corbin: [00:35:00] And so, I appreciate those elements about the work that you're doing as well. I always sort of like to close the conversation, recognizing that there are people out in the world that have been listening to this, and are thinking, oh, my gosh, TECH CORPS is awesome, Lisa Chambers, I need to get in touch with her and find out, but I'm in a place that doesn't have TECH CORPS, that doesn't have that particular opportunity. What's some low-hanging fruit that you would give a teacher or an informal community member who is just really looking to say, I want to do something like this for my own community?

Lisa Chambers: [00:35:39] Well, I appreciate that question. I feel like I can say today that there are a lot more resources than there were when I had to answer that question 10 or 15 years ago. At TECH CORPS, we love the open source community. We love how many schools there are available that are open source, that are free for parents and kids to download. I absolutely love the Scratch community. I think it's a great place and Scratch is a great tool of object-oriented kind of coding language, but it's so incredibly user friendly.

Lisa Chambers: [00:36:16] There are so many resources tied to it. You can do something very, very—we use it with our elementary school programs, but we've also pushed our high school kids to do. There's very complicated code on there. So. I think that that's a great tool. There's a national organization called CS for All Teachers, which is starting to do some just really good advocacy work and putting out some tools.

Lisa Chambers: [00:36:44] So, if you're a teacher that is interested in those things, I think that they're a great group. And yeah, I mean, there's just so much more out there. I will say the one thing that I often like to have our parents think about is when you're looking for these informal computer science programs, and even in your schools, really pull the sheets back and look at the students that they're serving, right?

Lisa Chambers: [00:37:16] Because I think the last thing we want to do is you don't want to send your child somewhere and just when they walk in the classroom, they don't feel like they see themselves or they feel safe and supported. And we're just not there yet in all of our programs. So, it's important to ask questions about the demographics of the students that are attending, the demographics of the staff that are working with students.

Lisa Chambers: [00:37:46] A father told me a stories that I think I want my daughters to be passed on to this coding camp, and he was like, she was there for whole week, she's the only girl in the program, and she kind of came back, and said, I'm never doing that again. And he said, I should have asked. And I think it is important, because we're still—and I think this has been pretty clear in the press, that we're still dealing with diverse spaces. And unfortunately, that trickles down all the way. And so, it's important for us to make sure that we're building those safe and supportive environments. And I think there's just some that are getting there sooner than others.

Annalies Corbin: [00:38:26] Yeah, absolutely. Absolutely. Great parting advice. So, Lisa, thank you so much for taking time out of your day and joining us. We really appreciate it.

Lisa Chambers: [00:38:35] Well, thanks for having me. It's great work, so I appreciate it.

Annalies Corbin: [00:38:38] Absolutely. Thank you for joining us for Learning Unboxed, a conversation about teaching, learning, and the future of work. I want to thank my guest 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.