Public Sector Future

Episode 54 – Building digital skills K-12, Coding in Minecraft

Olivia Neal (host), Superintendent Chris Reykdal – Washington State (guest)

TRT: 22:10

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**OLIVIA NEAL:** Hello and welcome to Public Sector Future. This is a show for anyone who cares about using digital approaches in the public sector to deliver better outcomes. I’m your host, Olivia Neal, and together we explore stories from around the world, where public servants have been successful at delivering change. Throughout the series we discuss technology and trends, as well as the culture aspects of how to make change happen.

I’m joined today by Superintendent Chris Reykdal of Washington State in the USA. Continuing our theme of building skills for the digital age, we're going to be discussing how Washington State have adopted programs like Coding in Minecraft, and other new approaches to certifications, to build interest and excitement in technology skills with students in schools across the State. We'll discuss how to build the foundational skills to support lifetime learning, and the role of hope and optimism in creating success.

Superintendent Reykdal, welcome to the show.

**CHRIS REYKDAL:** Thanks for having me.

**OLIVIA NEAL:** Could you share with us a little bit of background and context on the State of Washington and your role as superintendent? What does this cover?

**CHRIS REYKDAL:** Yeah, you know, in the United States, we really have this role in all of the 50 states. So each state has a Chief Education Officer. In my state, it’s called the Superintendent of Public Instruction. In other places that might be an Education Secretary or an Education Commissioner.

Twelve of the 50 states elect this role. So in 38, states, it’s appointed by a governor or a state board of ed, but in our state and in 11 others, we elect this role. Eight of those are partisan, and in four states, it’s a nonpartisan race. And in our state, it’s one of those nonpartisan elected races. So you’re the chief administrative officer for the state system.

But that said, it’s really about getting resources, data accountability, and learning standards and some research out into the field. Each school district in our state, though, is really making those critical decisions at the local level about their curriculum choices, and their bell schedules and all of that.

So a lot of local control, but again, in our state, this state executive office is elected and oversees the money that gets to schools, the learning standards, the research, the data, all of that.

**OLIVIA NEAL:** That’s really helpful context. Thank you.

And in terms of Washington State itself, How many schools are in Washington State? What kind of geography you covering? I think it’s a mix of urban and rural, is that right?

**CHRIS REYKDAL:** You know, it really is a West Coast state and Pacific Northwest. The western part of the state is 80% of the population west of the Cascade Mountains. The eastern part of the state is, you know, two-thirds of the landmass, but it’s only about 20% of our population. We’re approaching 8 million total people in Washington State, and we have about 1.1 million students in public school. Generally, about 90% of all kids in our state attend public school, and the other 10%, some former private school.

**OLIVIA NEAL:** Great, so a really wide geography and a huge number of students to be focusing on.

You’ve spent your career in government and in education. During that time, what types of changes have you seen technology make to opportunities and maybe to challenges, as well, in education?

**CHRIS REYKDAL:** And see, like everything in society, the productivity enhancement, the engagement value of technology, the ability to sort of make the world come to us and flatten us and kind of give us access to so much capability, that’s happened in education, as it has in just about every sector of the economy around the globe.

I think from being a classroom teacher to a schoolboard member and working in higher education and in our legislature, this role, that – that evolution has certainly helped me understand how much we didn’t do this. We didn’t create this with intentionality in public education for students. They mostly brought this to us. Students said, this is how we’re living our lives. We’re living in digital platforms all the time. We’re communicating differently. We’re researching differently. We’re acquiring knowledge differently.

And it’s a beautiful pressure back on the system to respond to that by putting some formal learning in there, because there’s still a lot of structured learning that needs to occur with this ability to integrate with technology. And obviously, one of those is just really understanding, you know, media literacy, small m, what’s out there, how much information do you have access to, how do you know it’s high quality, how do you discern that?

So it’s changing the practice of teaching. I think it’s a really powerful thing on balance that’s positive. But we certainly have to make sure we’re always putting those learning standards and those relationships first. Otherwise, it’s just a tool.

**OLIVIA NEAL:** I think that’s a really interesting perspective of the students bringing this to you and creating that demand and challenging you and people in the system to be thinking differently.

And I’m interested, particularly maybe as we’ve been coming out of the pandemic, when all educators had to respond so differently to continue to offer education and services, do you see any new challenges emerging in education as we come out of that pandemic, any changes in people’s expectations that you’re having to respond to?

**CHRIS REYKDAL:** You know, I think so, and I think you hit the key word is expectations. Most educators in this state, and I would say in the United States, have been integrating technology for a long time. Maybe it was the platform by which students turned in homework or looked at their grades. Maybe it was fully digital instructional delivery. So teacher delivering content maybe was static and fixed, and students just kind of got to it whenever they wanted to. Or maybe it was live instruction.

But there’s been some form of blending for a long time. The pandemic just put that in overdrive. And it was tough, and everyone scrambled from the hardware side all the way to the connectivity side, and then really the pedagogy. How do I teach? And how do I assess learning this way? It’s changed things.

So I will never substitute human relationships and the relationships that students build with each other and with their educator, and I’m glad we are back to that. But what has happened is students said, wow, I could do this, I can learn remotely at times. I don’t want to do it fully. That was not a good experience for most students. But I want it sometimes.

And mostly what I think students are telling us is, I can get the content on my own time. I need a relationship with an educator to tell me I am on track, to coach and guide me, and to make sure that I’m really focusing on the right things for the learning.

So teachers now and in the next 20 years, they’re going to continue to transition to be coaches and mentors, and guided pathway leaders for students, and a little less over time on the content delivery, because that’s everywhere. That really is.

Now, we’re going to again have to filter through high quality content versus stuff that maybe isn’t so good, but the world of teaching is changing, the pandemic sped it up, and the student demand for that is really what’s driving it now.

**OLIVIA NEAL:** And in terms of that student demand for new skills, new opportunities, thinking about getting students ready to be part of tomorrow’s workforce, we’re seeing an increasing demand for increasing technology skills. And that’s not obviously just in the tech sector, but in all walks of life.

And I knew that in Washington State, you’ve really been focusing on your technology education programs. And I wondered if you could share with us a little bit about the work that you’ve been doing with your coding and Minecraft program and the partnerships that you’ve had there.

**CHRIS REYKDAL:** Yeah, you know, I really think about it as an evolution. I’d say 15, 20 years ago, we were making sure students understood the power of computing. We were doing it to teach them that they’re going to enter a world of technology. So it was pretty basic where we had students starting to develop their assessment materials online, or they would submit their papers online.

And then maybe a decade ago, we really started to move into this idea that they need to be really functional, particularly in Office suite. So we began to build certifications and partnerships with Microsoft and others, but really led by the great work of Microsoft, to make sure students understood that this really powerful tool that they’re going to experience the rest of their lives from Outlook and Word to PowerPoint and Excel was a part of their learning.

And the latest evolution is really coding. It’s this next step in saying, not only are you going to use these incredible applications and tools, but what happens when you build them yourself, you shape them, you transform them, you customize them for your interests?

And of course, it’s in a platform that students have just really loved. They’re growing up with Minecraft. It’s evolving with them. So it’s a natural connection for them to say, wow, I love this platform, I love the functionality of it, and I now realize I can do this. So it builds huge confidence.

So we’ve been putting this together for a while. We’ve got school districts all across our state engaged in this as part of their approach to coding. Again with Minecraft, it’s just a really incredible way for young people to engage.

And I think it’s exciting for educators because obviously, when you connect the learning to something kids really love, you hardly have to do anything. It pushes itself down the tracks, and you’re just guiding it, and you don’t have to do a lot of lifting in that regard.

**OLIVIA NEAL:** And it must be a really interesting topic to think about in developing those types of opportunities. Because these are areas where you’ve got students who are really passionate and excited about these areas. And they’re things that they might be looking to look at and get into outside of school hours. And in some cases, they may be more advanced than educators are, than teachers are in these spaces.

And I think one of the interesting things about this type of program is for those educators, they don’t have to be computer science experts to be able to facilitate and lead this type of skilling and training.

**CHRIS REYKDAL:** There’s foundational pieces, and at the root of all of it, whether it’s in math sequences or science or English language arts or anything, it’s really, you’re inspiring some curiosity of students, you’re giving them foundational skills, so that they can begin to turn from listening and acquiring knowledge to starting to seek it themselves.

And I think with this sort of approach that’s going on here with Minecraft and coding, students are getting enough basic understanding of how systems work and how logic sequences work and how quantitative reasoning works, that then they take it on their own, their own time, extra time during their school day, and they’re going way beyond the framework of a classroom, which is what you dream about in education, an inspiration of young people, where they say, I got it from here, and now I’m going to go explore and test and push and challenge.

And then it’s integrated into their own curiosity, and it isn’t an assignment. It isn’t an hourlong class period. It’s a part of what they want to do. That’s what’s so awesome about this.

**OLIVIA NEAL:** And in terms of building that curiosity and that engagement and that foundation for them to go off and explore by themselves, I know that inclusivity is something that you and the State of Washington are very focused on. And I’m curious as to how you make sure that you approach these opportunities in a way that can benefit all students, whether they’re rural or urban, or from different types of backgrounds. Have you had to consider anything in particular there?

**CHRIS REYKDAL:** Yeah, so our state has a pretty unique place in the United States. We’re one of the only states that’s litigated basic education in our own court system. So our own legislature was essentially brought to the court.

And I only give you that background, because I think what we’ve been able to do is establish an expectation that something like Minecraft and coding, all the way to traditional mathematics and science, is going to come with a level of investment in equity in rural communities.

And that means you’re not paying out of pocket for this. You don’t need to pass a local levy where wealthier communities can do it, and maybe property poor communities struggle.

Our goal with this, and our objective in the state of Washington is it’s part of the basic education. So every school district, every building, every classroom, who wants to be a part of this gets access to this and doesn’t pay a big cost or zero cost out of pocket. Obviously, there’s time involved.

That’s the kind of equity that we focus on. And of course, there’s specific tools, too. We want our students with disabilities to access this. And those are protocols we build into any platform we work with, regardless of the age group that we’re working with.

**OLIVIA NEAL:** And it sounds like the response of students and of teachers has been very positive to this, and that engagement has gone well. Is there anything in those responses or anything in the way that this program has progressed and been rolled out that has surprised you, or anything that you’ve learned from this opportunity?

**CHRIS REYKDAL:** Yeah, I’m not sure surprised, because I think the opportunity was right there in front of us. Again, student demand, their want for this, their curiosity, their connection to this particular platform makes it pretty seamless for students to then integrate it in their learning.

For us always education is time, right? It is the variable we think about the most. If we have a thousand instructional hours with kids, and we inject something like this, if we do it well, and the learning standards are already embedded, it isn’t duplicative and isn’t one more thing. It’s just part of those really powerful thousand instructional hours.

I think on the frontend some people get a little nervous. Is this something I’m adding on and will it take away? And the confidence that we want to be able to bring to them is no, this is right in our learning standards. And because it’s designed so well, you’re hitting computer science skills, you’re hitting math skills, you’re hitting literacy skills. This is part of what you do, not as an add-on, but as a way to deliver those core instructional expectations. So no surprises because generally people go into it a little nervous. I think – I think the great thing is, they’ve realized this is absolutely their future.

**OLIVIA NEAL:** And I think Washington state has really been a leader in the U.S. in – in moving forward with this type of approach, both the coding and Minecraft, and then looking more broadly, certification opportunities around technology to help students prepare for the workforce, and to build those types of skills.

I’m pretty sure there are going to be people in other states, but also in other countries who are looking at this type of opportunity, and would be really interested in what you’ve learned and any advice that you might have. Is there anything that you would share in terms of how to get going with this, or how to think about those kind of partnership models to bring the delivery of this forward?

**CHRIS REYKDAL:** Yeah, number one, don’t try to reinvent the wheel. It’s out there. And the best educators are good copycats, right, to give credit, but they go find out where it’s working.

So for us, it was always about making sure that our learning standards were the thing we were leading with. So this wasn’t a bolt-on; this was a way to deliver those standards. And we have those frameworks. People can see those as well. Other states do, but we’ve certainly integrated computer sciences and coding throughout our learning standards.

The second thing is get a great industry partner. For us, it’s Microsoft. We have others, though, in our state as well. We’re a technology leader in the world, and we just, we love those companies, and we love what they’re doing in the world and with our students. But have a good industry partner, so that you have not only something relevant in your state that people can attach to, parents can say, oh, I trust them, and I know them, but also, these are folks who really can guide what’s coming.

So don’t grab a platform or a gaming framework or a software that’s on its way out. Grab something that they know and they’re investing lots of money into, and they expect it to be around for a long time. So that’s, that’s some of the advantages.

Anything they can get to in our space in Washington State at OSPI, just look us up, you’ll find us and all those learning standards set out there, and we’re happy to have everyone just grab them as much as they want.

**OLIVIA NEAL:** I think that’d be a fantastic set of resources for people to look for. And, of course, we’ll put the link to that on our website with this podcast as well, so people can go there to find it.

And I think what’s really exciting about skilling and technology and maybe slightly intimidating sometimes as well is that things are moving forward so quickly. The pace of change is so rapid. We might be thinking about coding now, but maybe tomorrow, we’re thinking about prompt engineering, or how do we work efficiently with AI.

And I’m wondering whether you have any aspirations for the students across Washington State when you think about how they can continue to build learning and skills, so that they’re prepared for their careers in the future.

**CHRIS REYKDAL:** Yeah, so what we focus on are what are those things that are going to make young people successful. And interestingly, the technologies do come and go. So we don’t particularly attach ourselves to today’s innovation, but rather, what are the foundational things that allow students to - to seek out and attach themselves to the next thing? Because they’re going to spend a lot more of their lives outside of public school than they do in it.

So when we say critical thinking, it is, can they think critically through complex problems? And that can be in literature. It can be in the social sciences, and obviously, in the sciences and computer sciences.

When we say quantitative reasoning, we mean, do they have a number sense, and are they thinking in logical sequences? And can they take complex problems and break them down? Do they see visual information, pictorial information, and assess it and break it down as quickly as they might if they read text.

So the cool part about all of this, whether they’re working in Minecraft, or something else, is the thing that brings an educator to the space of teaching, the love for children and the want for them to be critical thinkers and successful, it’s so embedded in this. It’s still what you do, whether you are teaching a five-year-old, or you are teaching a 17-year-old. We are still about the business of skilling them and empowering them and letting them take on the world. We just happen to be doing it in tools today and platforms today and examples today that I think a lot more relevant to the way young people think today.

But never get away from those foundational skills, because the tools are going to change and the names are going to change and the apps are going to change, but those things are critical.

**OLIVIA NEAL:** I think in a time when we are seeing everything move forward and change so rapidly, those foundational skills are going to serve students so well for the whole of their lives where education isn’t something that is just frontloaded in a career anymore. This is something that we’re all doing throughout our careers.

And in that sense, I’m interested rom you as a personal perspective, as you continue to – to learn, and you’re obviously very aware of opportunities that are out there, how do you keep yourself informed? How do you keep yourself up to date?

**CHRIS REYKDAL:** Yeah, I remember my children asking me probably three or four years ago, you know, kids get to some realization as they develop, they get a sense of what their parents may be doing, and they said, yeah, what do you actually do all day long?

And when I say to them is I read all day long, and I’m in a lot of meetings, as we all are. And I’m partnering with a lot of organizations across the state and through around the country, but what you’re essentially doing is reading.

And so a lot of research; I get to look at a lot of research. And then I get to listen to a lot of educators and a lot of industry leaders, who are trying to see the future, the – mostly in the space of student learning, student mental health, student wellbeing, but also some pretty cool stuff about the technology itself.

So I would definitely say I’m an educator first, and I spend a lot of my time in the research on student learning, student development, particularly in the contemporary American context with so much struggle in terms of student mental health. But – but the technology is fun, and I get enough publication and enough access to that, that I see the hope in that.

And that’s one of the big priorities we have is, again, not just those foundational skills, but also giving students hope. When you embrace a technology, it ought to be because it can do something positive in the world, because we know any tool can be used for good or used for negative ways. We want our students to be hopeful about that. That’s when they embrace it, and then they see a reason to be a part of it their whole lives, and it isn’t just an assignment that day.

So that hopefulness is everything. There’s research about that, too, by the way. There’s a science to hope, which is pretty cool. So yeah, a lot of reading, a lot of listening, and then a lot of driving to the future.

**OLIVIA NEAL:** Fantastic. Thank you. I think that hope, that optimism for the future is something that benefits us all to cultivate and to drive.

**CHRIS REYKDAL:** We really owe students this idea that they’re going to think big, they’re going to hope big, and that they have ambition about solving problems in the world.

And that’s just where I think technology gets them excited. They see the opportunities in that in ways that pretty traditional teaching and learning models don’t always do that.

It’s awfully hard to have a student doing, you know, logarithms, or factoring quadratic equations without the context of why. Why do we do this? Well, the second you’re in coding, and you’re building logical sequences, and it’s image based, and you’re designing it, and you can hit play, and you can test it, and then when it doesn’t work, you try again, we’ve dreamt of this in education our whole lives, hands-on learning. We just didn’t have the tools for 100 years. And now we do. So I would say to everyone, embrace this not as a technology question, but as a learning question with great technology tools.

**OLIVIA NEAL:** That’s a great message. Thank you so much. Thank you again for doing this with us and taking the time.

**CHRIS REYKDAL:** Appreciate you. Thanks a lot.

**OLIVIA NEAL:** Thank you to our guest, Superintendent Chris Reykdal, and thank you to you for joining me today on Public Sector Future. Visit us at wwps.microsoft.com to find lots more information on how to build digital skills. As always, please do send us your questions and feedback, you can find me on LinkedIn, or email us at ask-ps@microsoft.com. Thank you and see you next time.

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