LOUI: Hello, and welcome to UDL in 15 minutes where educators discuss their experiences with UDL. I'm Loui Lord Nelson, UDL author and leader. Today I'm talking with Ben Kelly who is a grade 6-12 STEM educator in the Anglophone East School District in New Brunswick, Canada. Today, Ben is going to share how he has used Minecraft as a tool within his implementation of UDL. Hi Ben, how are you?

BEN: I'm good! How are you?

LOUI: I'm great, thank you. And thank you so much for being a guest for this podcast.

BEN: I love podcasts, so it's great to be on the show.

LOUI: Oh, thank you. Thank you. Go ahead and please share with us your teaching background.

BEN: I started in 2004 as a technology teacher, I guess. Basically, when you start your career, most of you know that you just get thrown into any scheduled slot there is, so I took anything to get a job and I was told by the principal at the time that a job in technology education would be a dream job and a career job so I jumped at the chance. And here I am 14 years later, still teaching technology, still teaching STEM subjects and he was right! So far, it's been an absolute dream job.

LOUI: So, have you always been there in the Anglophone East School District?

BEN: Yeah, I started in a tiny little school Caledonia Regional, just south of Moncton, New Brunswick. It's got about 270 kids. And I like the mix of living in the city but working in the county side, so it's actually a great gig.

LOUI: How would you describe your student population?

BEN: Very rural. We have a bunch of kids that are into hunting. Everything is trees. Trees as far as the eye can see. But outdoors-y, too. We have national parks nearby and provincial parks nearby. So, a very outdoorsy population scattered with your indoor kids. Your video gamers, which is growing more and more every day. But basically, think of rural hunting and outdoor living.

LOUI: And right now, really cold.

BEN: Oh yeah, we're on…we've missed three days this week because of the horrible ice storm that I'm sure Massachusetts sent our way. Sometimes we're lucky enough to have Ontario and Massachusetts send us two storms at the same time, and I think that's what we just experienced.

LOUI: Oh my gosh. Oh, holy cow. Well, I'm going to just send everybody your accomplishments here because it just blows me away. 2018 was a huge year for you! You were recognized and celebrated through the Prime Minister's Award for Achievement in Teaching STEM for 2018, the New Brunswick Minister's Award for Education Excellence in 2018, you were named the WorkSafeNewBrunsick Teacher for 2018, and you were officially named a New Brunswick Innovator in 2018 by the New Brunswick government! That's nothing to say of the awards you received in 2017 and 16'. You're really recognized for also doing local research and subsequent articles about the implementation of UDL. So, let me know has UDL has influenced your education approaches that are so widely recognized?

BEN: I love to say that the UDL research that I wrapped up in 2015 started this all. That's, that's where I really got my wings and started going. The truth is, and you know this, and everyone knows this, that you can't have recognitions like that without staff and community members who nominate you for these things. So, I mean, all of these things would have been happening, it's just, the real heroes here are the people that took the time out of their busy lives to actually say, "Hey, another person deserves some, I guess, recognition." and took the leap to do it. A lot of us may think about, but it's really taking the time to nominate someone else in your community or your school. That's, that's the real heroes in my eyes. The people that take time.

LOUI: Ah, that's nice. That's really nice. And, you're right, it does take time for people to sit down and do that. And I wish more would to that. And educators can do that for educators. So, it sounds like you said, though, back in 2015 you were doing the research that influenced that paper, so maybe talk a little about that.

BEN: So, in New Brunswick we have the Department of Education, who are very forward thinking, and a lot of these initiatives like UDL, new pedagogies for deep learning as well, but we also have the University in New Brunswick who basically thrive on research, especially in education. Their education program is pretty solid. So they got together in 2013 and said let's assemble some groups teachers from all over our province and let's put together teams to do some action research in the area of universal design for learning. So, of course that was the moment that I decided to strike on my first ever research. So, I put a little team together. I became the leader and we charged into universal design for learning our topic was universal design for learning in, I guess, project-based learning. So how does it affect the engagement specifically in project-based learning. That's how it all started. We went down 15 different roads over the course of, I guess, the year of study with the students. We really focused on service learning project. So, if you're looking for what really happened. We had 123 different middle schoolers choose a service learning project and we made them go through the process of the service learning project following the steps of UDL, following, the three, I guess, pillars of UDL. And at the end we asked them what was your favorite part of the

whole procedure, and we narrowed down five aspects of UDL and how it helped engagement in projects. We had a whole heap of other things that we discovered. We did a lot of work with, I think the guy's name is Deci. He does self-determination work.

LOUI: Yes, Deci.

BEN: Yeah, Deci. So, we figured out during that research that you can't really teach a kid anything in school unless you activate emotions. In fact, if you really want someone to learn anything, you have to trigger emotions. So, we really focused on that throughout our work. We, we learned about a really odd gentleman in California. His last name is Tulley, and he runs the school Brightworks in California, which is like a progressive experimental type of school where kids light stuff on fire and they build bicycles and it's a big warehouse type of setting. But what we really loved about that part of the research is that Tulley's got this Brightworks Arc, I guess it's called. And with the three pillars of UDL are engagement, representation, and action & expression. And we found Tulley's Arc had three, three aspects as well. And he called those aspects exploration, expression, and exposition. And we found they really lined up almost perfectly. So, we, we fell in love with Tulley's Brightworks Arc while were we're doing the UDL research. And we really started compare the two programs or, or themes at the same time. So, again I'm backing up the fact that we went everywhere with this research, and in the end, we packaged up something nice and neat for the Action Research Symposium that basically told the story of the five things that we believed helped engagement.

LOUI: Yeah. And for podcast learners,

BEN: right.

LOUI: …I'm going to have the link to this whole report that was created that everybody can click on. And I was telling Ben earlier that I have disseminated this thing a ton because it's, it's so valuable. It just has the, the, the voices and experiences of

educators and who have utilized UDL and I love your example of how you all looking at other approaches and just seeing how UDL lays with those things. Um, and that's so important. That, that reflective piece and that investigative piece just makes the teaching so much stronger. BEN: And a funny, a funny piece of that, we, we got this beautiful symposium, this action research published by the University of New Brunswick and our Department of Education. And so, the first thing you do is you crack it open and, you go where's my research? Where's mine? Like, you wanna find it. LOUI: Right!

BEN: So, I opened up this beautiful manual and sure enough, my research, my team's research is like the first one in the whole collection! So, I think for about two weeks I was walking around, my wife couldn't even deal with me because I'm like, "Yeah! Mine was first in the book! I'm the best! You know, this was the best research!" And then, I think, I think three weeks later we came together to us, you know, we talk about the process and stuff like that and I flipped to the second research in the book and I realized that all they had done was alphabetically sort schools and our school had the earliest alphabetical. So, yeah, for two weeks I was on top of the world saying, "My research was the best!" and then I realized, no, no, it's alphabetical order based on schools.

LOUI: [laughter] Oh, that's great! That's a great story! Well, in the beginning I tempted everyone by saying that you're going to talk to us about Minecraft and how you use that as a tool for implementation. And I'm so curious about this because I don't know a whole lot of anything about Minecraft so please share that story.

BEN: And it's funny because recently I thought I thought everyone in the world, at this point, knew about Minecraft, so I sat at the table discussing Minecraft 20 minutes, you know, excited like on the edge of my seat, and then finally, the guy that works for the Department of Education leaned over and said, "What is Minecraft? I'm not really sure what that is." So, I realized 20 minutes and sort of gone…I'd missed my target there.

LOUI: [laughter]

BEN: If you don't know what Minecraft is, Minecraft is a block-based game, kind of like Lego but digital, where kids can go in, 30 kids can go into the same world and they can basically demonstrate their understanding. It's hard to teach in Minecraft, it really is, but you can demonstrate to a teacher and to others what you understand about a topic in a 3D, blocky environment. So, when I got this UDL research done, I realized one of the biggest things during the research was we gave students choice and voice. And that's become almost cliché at this point, but back in 2013, it wasn't. Back in 2013, it was, it was "the thing" and it really is still true today, it's just people don't say it that often anymore. So, choice and voice for students, and the biggest problem for teachers was the shopping list of how students could express or I guess represent their learning. In a classroom, you might have had one iPad. Not even that. One iPad was really rare to find technology So, kids are looking at you saying, "Okay, what are my choices for showing what I've learned? What are my choices for explaining to people? Or what are my choices or even finding out about the information?" And when you look back at them, you had the old cliché, "You could do a PowerPoint. You can do a song. You can do a video." And then the list can really short really quick unless you were into crafts. All of a sudden Minecraft arrives on the scene and I truly feel that Minecraft Education Edition, the one that's available for schools, is a triple threat when it comes to UDL. It can help students with the engagement factor which is the first pillar. It can help students represent their understanding. In fact, that's its greatest strength is representing their understanding and working things out together collaboratively. And then finally, it can be actually used as the showpiece, as the showcase work. So, Minecraft itself in your kids' classroom could be the all-in-one UDL solution that teachers have been looking for. And I have benefitted greatly, and I plan, I hope that if the New Brunswick Department of Education goes back into another round of action research, my focus 100% will be on game based learning and UDL.

LOUI: So, earlier you talked about Deci and his work in self-determination, which of course permeates the guidelines in engagement, and then there's the concept of choice of course that's driven by self-determination, and this link with Minecraft. And so, as the

students were learning about it, what did you see them doing when it came to that choice of using Minecraft and kind of working through their own comfort with it?

BEN: Out of the five things in our study that we found improved student engagement in projects and just project-based learning in general, number one was extended timelines or the ability to choose when to work on it when it's due, not having, not having strict structure. Students in grades 6-12 do not like a structure, and in the middle schools specifically, do not like to be told what to do when to do it. So, we found the choice was the big one. The second one was the ability to choose what they love. Like, to be able to use the tool that they love. So, if they were musical guess what, they flocked to music. If they were just a hard-working country boy, well maybe they get something, you know, physical labor. Maybe they were out of the woods chopping things down. For instance, we have a graphic designer who is actually going to school next year with it for animation. She made a flag that's sold nationwide. It's an anti-bullying flag. So it has two hands holding each other and it's a pink anti-bullying flag that they fly across our country now…

LOUI: wow

BEN:… for anti-bullying week every year so cities can fly from the town halls and stuff like that so she was a graphic designer and she was bullied and she wanted to do something about it for her service learning project and now the country has an anti-bullying flag is like that is sold through the flag shop because of her service learning project for this UDL initiative. So, um, kids picked what they loved that that was the big thing. They love the choice and I really do feel Minecraft fits in there because if you asked a classroom level any great six or eight kids still today you know who likes Minecraft you're getting 85% plus hands firing up going over me, me, me, me, me! So, it's not fading anytime soon. And if you can grab a copy of Microsoft's you know Minecraft For Education, you should uh, you should definitely try to get it in your child's school soon because it's a UDL triple threat. Okay, I'm going to ask one last question in our little bit of time remaining when I think about what basic level of the UDL framework

of access and our students who maybe don't think in a three dimensional format or they kind of struggle with that but they're really intent on learning about Minecraft because it is popular, how did you help you build some scaffolding in for students to start working with Minecraft. There's a really big like 3D, right can be overwhelming like right off the start. I think we've benefited from this generation like growing up in sort of the Minecraft era, but back then it wasn't so, so there's another great website called Sploder, s-p-l-o-d-e-r that I used, and it's a 2-dimensional game so it's your Super Mario type setup allows you to build full fledge platform games and things like that. So that's how I got kids introduced to it at a lower level. Some actually remained on Sploder. Some did not migrate to Minecraft because maybe it is the three-dimensional challenges involved, but there are lots of resources out there to keep it in two dimensions. On paper and pencil as well. You don't have to go and digital but just to get them thinking. It's all about the seven C's I say the collaboration, citizenship, and creativity, character building, you know there's a communication. It's all those C's in the classroom because of those C's will follow them every career they have in their future.

LOUI: Oh, that's so perfect. So perfect. You did a great job of showing us with this whole choice and voice piece can be through Minecraft, but even through these other examples that you shared along the way. I really thank you so much for being a guest for UDL in 15 Minutes and I know people are going to be probably trying to contact you for some more suggestions, because it sounds like you have them right up your sleeve.

BEN: I do have a website loaded with the Minecraft resources. My website is bbtnb.com and my Twitter handle is conveniently @bbtnb as well and I share basically everything. So if you want to know what's going on in my room tech wise, hit me up on Twitter.
LOUI: Oh, thank you so much Ben. I really appreciate this again. Thank you.

BEN: Thanks for having me! This is great!

LOUI: So, for those listening to this podcast, you can find supplemental materials like an image montage with closed captioning, that montage audio descriptions, a transcript,

and an associated blog at my website www.theudlapproach.com/media. Finally, if you have a story to share about UDL implementation for UDL in 15 Minutes, you can contact me through www.theUDLapproach.com . And thanks to everyone for your work in revolutionizing education through UDL and making it our goal to develop expert learners.