Brenna Clarke Gray:

Hello and welcome to You Got This!, a podcast about teaching and learning and pivoting to digital for the whole TRU community. I'm your host, Brenna Clarke Gray, Coordinator of Educational Technologies. This podcast is a project of your friends over at Learning Technology and Innovation. We're housed within Open Learning, but we support the whole campus community. I record this podcast in Tk'emlups te Secwepemc within the unseeded traditional lands of Secwepemcú'ecw, where I hope to learn and grow in community with all of you. Today, I'm thinking about openness, what openness fixes, what it doesn't, and why you might want to dabble. Let's get into it.

Brenna Clarke Gray:

So, this week, Jamie and I have been running a workshop called Life Beyond Moodle, where we show folks how to build a core space on WordPress instead of inside Moodle or on Pressbooks, that you can provide to students outside of the Moodle infrastructure. We have two different iterations, a version where students still submit assessments through Moodle and a version where they don't. One of the questions that I keep coming back to in my own head is like, why are we showing this to people?

Brenna Clarke Gray:

There's lots of good reasons that are really just affective. We're all tired of looking at Moodle. It's fun to learn something new and dabble in a new project, especially when maybe you've got a little bit of Moodle fatigue from staring at the same teal green walls for so many months, but there's larger reasons to move into the open as well. Open pedagogy is something that's really important to me, somewhat ill defined, but really important to me. To me, open pedagogy is just sharing our teaching and learning practice out in the open. So, anyone who has come on the show to talk about teaching and learning with me, to me, that's open pedagogical practice. Folks who open up their course spaces so that people can see their materials. Folks who build OERs and share their assessment practices. To me, these all connect to open pedagogy. It's really just, for me, an open conversation about teaching and learning, where we're able to learn from each other. The reason why I love open WordPress or Pressbook-based course spaces is because I get inspired by seeing what other educators are doing with their students.

Brenna Clarke Gray:

It's fun to look at other people's assessments to adapt them for my own content and, to me, openness is a bit of a reciprocal relationship, right? I borrow from you. So, it's pretty ethically important that I also share something back into the community. Otherwise, the well dries up pretty quickly. I'm not saying that open is the right choice for everyone, but I think that it can help us break down some of the silos that emerge between our disciplines, even at a relatively small institution like TRU. Maybe there are practices that we all want to get better at that we can share resources for. If we're not willing to have conversations about our teaching and learning out in the open too, I think that it can make the whole process of learning how to teach feel really Byzantine and mysterious. I always come back to the fact that most of us don't come to these jobs with any teaching or learning training whatsoever, which is super weird when you think about it for too long. Because of that, I think I owe most of what I know about teaching and learning to people who are willing to open up their practice for me.

Brenna Clarke Gray:

So, I guess I feel a bit of a reciprocal responsibility to open up my practice for other people. Anyway, even if you miss the workshop that Jamie and I have been running this week, the resources are all available online. I'll link to them in the show notes, and there's still time. There's two more workshops.

You're more than welcome to jump in anytime. So, I'll include a link for the registration too, but even if a workshop isn't in the cards for you right now, and Lord knows, I understand if that's the case.

Brenna Clarke Gray:

Then, I wonder if you might think about how you could open up aspects of your teaching and learning to your own scholarly community. I wonder if things like H5P resources that you've created you might share them to a repository, or you might think about inviting conversations about your teaching from your colleagues. I think that that could be particularly useful right now, as we look towards a fairly uncertain fall. Maybe getting feedback on some of the component parts you built in the last year could be useful as you think about what's worth reusing next term.

Brenna Clarke Gray:

I think if you're new to opening out your practice, even just finding one or two people to have those conversations with, who you trust, can be baby steps in that direction. Ultimately, I think it's all to the good. I don't advocate for any kind of forced openness. I think openness only works when we have the opportunity to go into it in an open-hearted way. If we're forcing people to open up their practice, that's not really the point. Everybody comes to it at a different stage in their career and with a different amount of readiness. But I encourage you to think about how other people opening up their practice may have benefited you over the years and why you might want to reciprocate.

Brenna Clarke Gray:

Changing gears a bit, although the ethos is pretty much the same, I'm thrilled to be joined by Franklin Sayre today. Not just because he's a librarian and librarians are inherently great as people, but because he's here to talk about the TRU Makerspace coming January, 2022. I think you're going to want to know more.

Brenna Clarke Gray:

So, today, I am here with Franklin Sayre. Franklin, would you introduce yourself to folks and let them know where they might have interacted with you on campus, maybe in the before times, or maybe since?

Franklin Sayre:

Yeah. Happy to. So, I'm the STEM and Makerspace librarian at TRU. I joined TRU in 2019. So, I'm responsible for library support and working with students and faculty from the sciences and the trades. Since about 2020, early 2020, I've been working on implementing Makerspace at TRU. So, I've also been meeting with folks to talk about what a Makerspace will look like and how that will work on campus. Many of you may have met me in classes before, as I've gone in to talk about searching databases and finding resources for your research on learning.

Brenna Clarke Gray:

All right on. So, the Makerspace is really why I invited you on the podcast today to tell folks about it. So, maybe you could kind of give us your elevator pitch for the Makerspace, let us know what it is and where it's going to live and why people might want to know about it.

Franklin Sayre:

Yeah. So, the Makerspace is really exciting. So, in January, 2022, we're going to open a seven room Makerspace in the bottom floor of HOL, just behind the Tim Horton's. HOL, of course, is house of learning, to expand that acronym a little bit. The Makerspace will include a big central room with a lot of tables and space for students and faculty to work in small groups or individually. Then, we'll have two VR studios and a podcasting studio, a room we're calling a textile arts room with an embroidery machine and some sewing machines. A STEM education room that will have educational robots as well as a Raspberry Pis and Arduinos and some computer prototyping equipment. Then, we'll have a 3D printing room that will have a couple of 3D printers and a laser cutter. Basically, what a Makerspace is, is it's a space for unstructured exploration and play with emerging and new technologies. I think what makes it really exciting is that unstructured piece, it's a place where we really want users to be able to come without really any intention of what they're going to do. Or, with any previous knowledge with any of these technologies have an opportunity to have hands-on experience with them right away. As well as a space that faculty and researchers can come in and advance their goals and explore new methods of instruction or new research ideas they have.

Brenna Clarke Gray:

So, I feel like you guys piloted some pieces of this before the pandemic, right? I feel like I went into a room and there were materials there. I feel like the textile room was a thing that I saw once, but a lot of things that happened in early 2020 are very much a blur to me. So, am I right?

Franklin Sayre:

Yeah, you're right. It blows me away even thinking about the January, 2022 as our start date, because time right now just seems to mean almost nothing. So, in 2020, in January 2020, we did a soft launch of what was supposed to be a one to 1.5 year pilot Makerspace, in which we turned three study rooms into sort of an exploratory pilot Makerspace. We had butcher paper on the wall. We had a bunch of Sharpies, so people could write stuff. We didn't spend a lot of money. It was intentional. We bought a basic 3D printer and embroidery machine and a VR headset and some robots and stuff. Really, the intention there was to spend some time exploring what our users needed and what programming people wanted, what worked well, what doesn't work well. We operated that for about two months and then, of course, the pandemic hit and everything shut down. But in that time we were able to host a lot of groups. We had a lot of drop-in students come through the space. We had some classes come through the space and we met with just a ton of people on campus to talk about what their needs are. We still learned a lot even though it was cut short.

Brenna Clarke Gray:

So, in general on the show, we talk about teaching and learning applications on campus. Considered widely, we talk about student needs and services, and we talk about what people are doing in their classrooms. How do you envision faculty making use of the Makerspace or do you envision that at the moment?

Franklin Sayre:

Yeah, we absolutely do. So, there's two sets of users when we're thinking right now about the space and all of this is still in process. So, we're going to be going around for the next couple of months and probably for the next couple of years meeting people on campus and bringing them into the space. Talking to them about how they want to work in the space and how they want to partner with us. So, when I talk about things, I want to be clear that none of this is written in stone at this point.

Franklin Sayre:

We do have our one group of users that are the drop-in users who don't really know what they want to do and just want to explore some things. But we're also thinking in terms of how to support ongoing users and curricular users. So, in terms of faculty, we really envisioned faculty working with instructional designers, working with CELT, working with us to think about how the learning objectives in their classes relate to these set of maker competencies that have been developed, and how those map together. Then, thinking about projects or activities, like reflections that they can do where students can come in, either as individuals or in groups, and use aspects of the Makerspace to advance parts of those classes. So, for instance, if I could give a quick example, there's a bachelor of education program on campus that includes a cohort that is specific for STEM education. So, they're this really great group of students who are passionate about teaching mostly secondary students STEM topics. So, these are core users of our kinds of technologies. Early on in the pilot, we ran a couple sessions where essentially we created a couple sets of activities for these students to come in and go through. One was with the educational robot. So, we built some mazes on the floor and we worked with them to think about how they would structure an activity with students to program the robots to move through the mazes.

Brenna Clarke Gray:

Oh, cool.

Franklin Sayre:

Then, we gave them all a VR experience and we used the material cutter with them, so they could think about how they would use that in their classrooms as well. So, that's one example of the activity we could see doing and the outcome of that was a short set of reflections about what they thought about the space and how they would use some of the technologies. A lot of other programs on campus have an innovation component or a design component. And we could see working with those students to use some of our tools to complete those assignments. So, for instance, prototyping a particular tool or a new innovation.

Brenna Clarke Gray:

You used the phrase maker competencies just then, and if someone's listening and they're not quite sure what you mean by maker competencies, can you say a little bit more about that?

Franklin Sayre:

Yeah. So, we're using a set of competencies that were developed by the University of Texas at Arlington. Essentially they're a set of 15 competencies, larger competencies with sub competencies under them. So, there are things like ideate. So, identify the need to invent, design, fabricate, build, or repurpose, or create a new thing. I'm cutting parts of that off. Analyze the idea, question, or problem, explore the idea, question, or problem, or potential solutions. So, that's in the ideate section. Then, there's create, there's manage, and at the end there'll share it, which is great. So, pursue entrepreneurial opportunities, be mindful of the spectrum of cultural, economic, environmental, and social issues surrounding making. So, these sets of competencies and each of those are a larger one that has sub-competencies under it. We envision at least right now, as a set of competencies that faculty could think about mapping on to what they're teaching in classes.

Brenna Clarke Gray:

Yeah, totally.

Franklin Sayre:

Then, that can be the set of outcomes that they think about in terms of when they're trying to create an activity. We really are hoping that the instructional designers on campus and faculty can work together to guide the development of those activities. Then, we can be a space where those are made real, where we can also work with the faculty to make sure that we have the equipment and we have the space, and we know that they're coming in. We can work with them to help them do what they're going to do. Whether that's make a podcast or have a VR experience, or sew something using our embroidery machine. I think there'll be beading work. We don't want to put any particular controls or limits on those things, but anything that can be done with the technology, we have in the space.

Brenna Clarke Gray:

That's very cool. I like those maker competencies too, because they're quite, maybe broad is not the right word, but I can see them having broad applicability across the disciplines, right? You think of STEM and Makerspaces as having a natural affinity for each other, but I can totally see how social sciences and humanities, English classes, would be doing very similar kinds of critical thinking work that actually really nicely maps on to thinking around ideation, and testing, and all that kind of stuff.

Franklin Sayre:

Yeah, and I like that, for instance, the ideate and create ones, I think, seem more obvious to people. But the second set of them, the manage and the share ones are particularly interesting. So, manage includes developing a project plan, assembling effective teams, collaborating, having effective knowledge management practices. Then, under share you need to start thinking about legal issues, issues around copyright and licensing, whether you want to have entrepreneurial opportunities. So, I think there's broad applicability of these, which is why we're at least right now using them as our framework for curricular embedded activities within the space.

Brenna Clarke Gray:

So, I guess my question is why now, why TRU, what brought this project together at this moment, or maybe the moment was two years ago, but you know what I mean? Why a Makerspace for our campus?

Franklin Sayre:

Yeah. So, I came from University of Minnesota before I came to TRU. Before that I was at UBC. When I was at UBC, I was on the board of the Vancouver Maker Foundation, which puts on a maker fair every year. I was part of putting that on. Then, also part of putting on a number of educational camps for kids around making. That's always been where my interest came from. I'm actually less of a maker myself than I am passionate, interested in the cultural environment that develops in these spaces when they work. This horizontal teaching you have between users. It's very unstructured. It's not vertical. I really find that fascinating and very energizing to be part of that and to see it when it happens. Then, at the University of Minnesota, I had the opportunity to be part of helping them think about the design of their spaces. They were building as I was preparing to leave that institution. So, when I came to TRU I expressed interest in this and put together a small proposal and got a grant to start the pilot. I think it was actually luck and good timing that the library is, I think a lot of people know, moved from the old library building into HOL after the pandemic happened. So, they were figuring out what spaces would be used for what. There was a seven room space available that would work well for a Makerspace. So, that's pragmatically how this came about.

Franklin Sayre:

In terms of why TRU, I actually think having worked at other institutions that have Makerspaces, I think TRU is an example of an institution where Makerspace really works perfectly because we're a medium sized institution. So, if you're at a really large institution where the faculty of health sciences is 20,000 or 30,000 people, really all the faculties are going to have their own large Makerspaces, even departments might have their own Makerspaces. So, there's less interest in collaborating between something that could be a common good on campus, which is really too bad because these spaces work better when you bring together people from the trades and the arts and the sciences and business together in one space, because that's what makes them magic.

Franklin Sayre:

So, TRU's the type of institution, I think, where the size is right, where you walk around campus and you get to know people and it actually would work, I think, to build a collaborative environment. I think that's a big benefit. Then, we also have a really great trades program and a really great business program and other really great programs that have a lot of really engaged, knowledgeable students and faculty, who are excited about a space like this. So, I think it really makes sense at an institution like TRU.

Brenna Clarke Gray:

Okay. So, let's talk brass tacks. So, let's say I'm a faculty member and I've heard there's this Makerspace and I've got my students doing some creative project. Maybe I want them all to make podcasts. Maybe I just haven't given them a pretty open-ended assignment. I want to intersect with the Makerspace in some way, what do I do from the pre-semester standpoint, what do I do?

Franklin Sayre:

Yeah. You know what? I'm going to be honest and say we're still figuring that out right now.

Brenna Clarke Gray:

That's allowed.

Franklin Sayre:

You are working with CELT, we're working with other stakeholders. I would say that I think the way we would envision this working is that hopefully faculty would reach out early and work with instructional designers and work with us to scope out and think about what this would look like. We want to make sure that projects that are being assigned are of an appropriate size and an appropriate scope for students to actually conduct, and that it'll work within our space. We're not a massive space. So, we want to figure out what's the right balance between those things and then work to figure out what the competencies and outcomes are that make sense within the scope of the class. We'll probably have to trial some stuff. Faculty should expect to get their hands a little dirty and come in and make sure that it's actually doable, but that's pretty exciting as well because it's a lot of fun to work with these tools. It's a lot of fun to prototype and tinker and explore and do things iteratively. So, to do that and then to come up with actually how we're going to do that, and whether that is small groups dropping in, or whether we host a workshop, or have a class visit. All of that is the stuff that's being determined right now and over the next six to eight months.

Brenna Clarke Gray:

Yeah. That makes sense, and also stuff that will probably change as things roll out. I liked what you said about faculty getting their hands dirty. The only thing that we do that's really analogous are our e-portfolios. One thing we've really learned from a lot of trial and a lot of error, somehow possibly more error than trial, is that the project works best when faculty also set up a WordPress space and are also messing around. Not just because students are going to have questions and it helps to have a basic familiarity or fluency with what they're working on. But because it shows the faculty member's investment in the tool, which is a really big selling feature when it comes to getting buy-in on non-traditional assessments generally.

Franklin Sayre:

Right. Yeah, and I think we don't really want the faculty to just drop a time in for their students to just come into the space without letting us know. We're not a huge space. So, we're really going to want to work with faculty to correctly scope the size of what they want their students to do in our space and think about that. I think that's going to involve a lot of hands-on work. I think in doing that hands-on work, in my experience, that is where you figure out what the right scope is and what really works. The first version you go in with is not the version that ends up working, it's the fifth or sixth version. So, being able to spend that time and think through the process is going to be, I think, the valuable piece that creates the assignments and activities that really work well.

Brenna Clarke Gray:

Yeah. I'm excited just to have you guys as a space where, I don't know, iterative practice is really explicitly happening on campus and people can see examples of how it works. I think that's really valuable.

Franklin Sayre:

Yeah. I think the key thing we're trying to do in this space is create a culture of that within this space. I think I've said over and over again, over the last year as we've put this together, that the technology is not really the important part of the space. You can buy a 3D printer and a VR headset and put them in a room and it doesn't make anything particularly interesting. In fact, if you walk around campuses anywhere, you will find lots of rooms that have a dusty 3D printer up on a shelf that hasn't been plugged in or used in months or years.

Franklin Sayre:

What makes the spaces interesting are the scaffolding that you provide and the culture you create that allows people to feel comfortable and welcome, and that they're meant to be in the space. Also, that design thinking and iterative thinking processes that allow them to feel like they're allowed to make mistakes. They're allowed to be messy. That that's the point of being in the space. So, we also, in terms of instructional design, we want to make sure our instructional design mirrors that. That the instructional design isn't simply come into the space, download this thing, plug it into the 3D printer and hit print. We want it to be a process of thinking about what you're actually trying to do in designing something new and being innovative and making mistakes, and fixing them when they come up, and then trying it all again. It's not always going to be pretty or straightforward, but that's the point of the space. I have a friend at Vancouver Makerspace. He's one of the people who started the Vancouver Hack Space many years ago. It's how I got interested in this. He's traveled around the world on his off time going into Makerspaces, because he's just really into them. One of the observations he told me years ago that's always stuck with me is that nothing ever really gets completed at a Makerspace. The

Makerspace is where people learn how to use a tool and they meet a bunch of people and they maybe do their first couple prototypes. But usually by the time they're at a stage where they're actually trying to complete something, they've moved beyond what's available in the space. They need to buy some equipment or work with someone else. This was within the context of people doing innovations or entrepreneurship or inventing things. But I think it holds true for the culture we're trying to create, which is that the outcomes aren't necessarily the important thing. It's really the process.

Brenna Clarke Gray:

Well, I'm thinking about this in terms of knowledge mobilization for faculty research, because when we do our workshops around that topic, one of the things I know is that everybody's really excited about the idea of a podcast, but they have no idea what goes into it. We can describe it. We have tons of little videos, here's how to edit a podcast. Here's how to find music. We've got tons of that stuff. But it's not until you actually sit down and record it and think about releasing it and wonder if you actually want comments. Which is a big part of that particular method of knowledge mobilization. So, I'm just eager to have a space on campus where people can go and mess around before they've spent $250 on a microphone for their office to really see, is this the kind of I want to be doing? What are my other options? Where else might this project fit? Because oftentimes, let me try and say it, we don't always know what the best modality is until we actually are in the midst of it. That can be frustrating if you're not set up to think in that way. So, it's nice to have a space on campus that is very much just about play and practice and trying things out.

Franklin Sayre:

One of the most important tools we're going to have, I think within this space, is actually just a bunch of cardboard and sticky tape or sticky notes, actually, and tape and Sharpies so that people can get messy and prototype with things. But just physically, like a lot of the tech is really interesting because people get really obsessive with the idea of 3D printers or laser cutters as that being the most interesting thing. They are very cool and it is very, very interesting. But the switching modalities is something that I think is important. Then, also providing more basic and welcoming ways for people to start thinking. Another thing just related to that, that I've been thinking a lot about is how to prompt that kind of thinking. I've talked with Andrew Fergus in SOBE, who does a lot of stuff around design thinking. I'm going to be talking with other people on campus who care about these things to discuss what activities can we set up for people who walk in to get them to start thinking in that way? What design thinking activities can we have? Because it's really hard when you walk into a space and someone's like, "Hey, welcome, be creative." If that's me. It's not going to work. I immediately shut down like instantaneously.

Brenna Clarke Gray:

Totally, absolutely.

Franklin Sayre:

So, we also recognize that with a lot of those instructional stuff we're going to be doing, and this will probably include with curricular embedded stuff where we're working with faculty is just basic assignments, not assignments. But basic instructional scaffolding to get people to start loosening up and be more creative. A silly little example of that that I like, because I'm a very ... I can sometimes be a cynical guy is, I had an assignment once at a workshop that was as a piece of paper with 20 circles on it. You're just supposed to draw something in every circle. It was just like a design thinking activity to get the juices flowing. I started doing it in that way sometimes, and as a faculty member to workshop, you

just start doing things because you're expected to. By the end of it, I was like, "Oh, wow, that was really crazy. My mind is much more open and loose now." Halfway through that two minute activity I started thinking of, "Oh, wait a minute. I can actually draw outside the circle. They didn't say I couldn't do that. the circle can be a smiley face. It doesn't have to have something drawn in it. So, thinking in terms of how we also scaffold and create opportunities for students to start in a comfortable way, thinking about prototyping an iterative thinking and design thinking that gets them into that psychological space is going to be something we have to think a lot about.

Brenna Clarke Gray:

I just love the idea of a place where I can go and plan stuff and be messy because one of the things that is frustrating about faculty offices, there's never enough space to actually just like map out a project. It's always like -- without looking like somebody needs to call the FBI because you look like a serial killer. That's my process. We're almost at the end of our time, Franklin. I was just wondering if there's anything we haven't talked about with relation to the Makerspace that you want to make sure people know or any sort of last thoughts you want to share.

Franklin Sayre:

Not off the top of my head. I would just say that as we're in the process of reaching out to people on campus, I want to encourage people to feel comfortable reaching out to me and sending me an email. I'd love to talk with you individually. Or if you have a small group that you want to talk, you want to meet with me with, or if you want me to come to your department, we will hopefully be planning to visit as many people on campus as we can. But if you're particularly interested in this topic, please reach out early because we're really at the point of thinking about what the space looks like in terms of programming, instructional design, and policies and procedures. Now is the time for us to be loose and think broadly. So, I really encourage people to reach out if they're interested.

Brenna Clarke Gray:

That's awesome. I'm so excited about this space. I intend to haunt it. So, I'm looking forward to it being up and running.

Franklin Sayre:

Yeah. I'm really excited to host you and have you in the space and also the rest of the TRU community. We really want this to be a open, welcoming space for all students, faculty, and staff on campus to come in. Just play with some tech and look around and see what they think and think about how they want to use it for their other goals and initiatives.

Brenna Clarke Gray:

Fabulous. Thanks so much for your time today, Franklin.

Franklin Sayre:

Yeah. Thank you.

Brenna Clarke Gray:

So, that is it for Episode 32 You Got This!, as always, if you want to write to us you can email me. I'm bgray@tru.ca. I'm also on Twitter @brennacgray. In both cases, that's gray with an A. All of our show

notes and transcripts are posted at, yougotthis.trubox.ca. Of course, you can always comment on individual episodes there.

Brenna Clarke Gray:

I'm going to leave you today with a tiny teaching tip. Today's tiny teaching tip is a little bit about the messy iterative thinking that Franklin was talking about and a little bit about the openness off the top of the show. Can you build some space in your course to talk about failure, talk about making mistakes, talk about how you came to a process of thinking about your discipline, the way that you did? A couple of weeks ago, back at Congress, I gave a paper about my experiences of blogging failure. I was reminded of just how useful it has been to be able to talk about failure throughout my practice as a teacher and as a learner. I'm often struck by our lack of models of failure in the academy. There's a really great article, I'll link to it in the show notes. All about the idea of militant failure, that in the academy we need to adopt a form of militant failure in order to push back against the kinds of stories of failure that we hear only once they're wrapped up in a larger story of success. Talking to each other about failure shouldn't be about reinforcing resiliency. It should be about making space for mistakes. So, maybe there's a way you could open that space up for your students. I hope you'll give it a try. Until next time, take care of each other and yourselves. We'll talk soon. Bye-bye.