

**Trades Summit Series: Strengthening Teaching and Learning for the Future**  
**BCcampus: November 25, 2022, Day 2**  
**Secondary Benefits of Collaborative OER Development in TVET**  
**Presenters: Brianne Hutchinson and Warren Anderson**  
**Host: Tim Carson**

TIM CARSON:

I want to introduce you to the next presentation we have here entitled Secondary Benefits of Collaborative OER Development and TVET, brought to us by Brianne and Warren. Brianne Hutchinson is a learning experience designer, Centre for Teaching and Learning and Innovation at Lethbridge College. And Warren is a teacher at Westwind School Division. So please, You know how you trip up on your words at their worst opportune time. Here's Brianne and Warren. Thank you.

BRIANNE HUTCHINSON:

Hi. Good morning, everybody. Nice to see everyone. Hope everybody is doing great. We have my mentimeter to share with you all today. So we're just going to share my screen so you'll need your phones so you can just follow along with us. But if you have your phones and are able to go to the Mentimeter, then you'll be able to actually participate in some of the things that we have today. We have some polls and things like that they were hoping to find. So let me just share it out. Okay. Can everybody see that? I hope. Okay. Alright, so if everybody could just take their phones, menti.com and enter that code or use the QR code, then you can be a part of our presentation.

WARREN ANDERSON:

We got some hearts. It's awesome. Yeah, it's good.

BRIANNE:

Again, is in the chat area. Will give you just a few minutes here to join. Okay, I'll just go to the next slide which will also have still, the mentee website and also the code at the top if you still need to join. And something that we're curious about today is what is your role? So on your phone or computer there, then you can actually fill it in. So this is great to see who is all here today with us and who we're talking with too. Well this is exciting. Some instructors able to come. Curious to know who is some of our other roles that we have here today, joining us. And learning support as well. This is awesome. There we go. Good. We have about 20 people are awesome. If my math is right. All right. Yeah. And so that was just also a chance for you to practise and see if this works for you. If this is the first time that you're trying to use this kind of program to join with us. So anyways, this is our presentation of secondary benefits of collaborative OER development and TVET. And yeah, I'm Brianne Hutchinson and I'm one of the instructional designers, learning experience designers here at Lethbridge College. And I was a teacher before. And the past year-and-a-half, I have been working very closely with the trades and we have been working on a giant STEM project, and we have lots more to say about that and what's going on. And we're, this experience today is to really dive a little deeper into what has been our intentions with the STEM program where we're working with the trades and

teachers. And some unintended costs, unintended results, I guess, of that collaboration. And what we're actually seeing is happening between all the stakeholders and the parties involved and how it's really changed practice.

WARREN:

And I'm Warren Anderson, I'm currently teaching at Westwind School Division in a small town called McGrath in Alberta. And I've been working with Lethbridge College with the Trades Department and the CTLI department for about two years, two-and-a-half years on developing some of these resources that bridge the gap between our K to 12 school system and post-secondary trades programs. Because we know it's Friday and it's the end of the week, and this is your second day of being in this summit. We thought we would start off with another little poll just for fun. Thinking of your dream Saturday or what you've got coming up this Saturday and just give you a moment to see what everyone's up to and what you're looking forward to.

WARREN:

We need one that says report cards. I've got that coming up on Monday. I have to get up and go to all the activities this weekend since it's close to Christmas, we already have some family events coming up to squish everyone and I don't know if anyone else is experiencing the Christmas attack for family members yet. Getting everyone in before Christmas. December 23rd. My favourite one is like what day is it today? Love it. So everyone's got a little bit of everything. I wish that whoever has no plans except pajamas and movies I'm super jealous. That's super awesome. Wait, what about the others? Some people got some interesting things going on.

WARREN:

My question is the movie. Before we jump into it, we would just like to do our nice land acknowledgment. We have a lot of pride and a lot of care and respect for our community here and who is here. So we are located on the traditional lands of the Blackfoot Confederacy. And Lethbridge College is committed to honouring the land from a place of knowing. We honour the Siksikaitsitapi as both the traditional and current land keepers of this area. And we welcome all First Nation, Métis, Inuit, and non-Indigenous people who call Blackfoot Territory their home.

WARREN:

So what is this session all about? I do have some notes here that I will read from, but I'll also veer from the notes as well at times. But Lethbridge College is collaborating with the K to 12 STEM teachers to develop OERs. So those include videos and lesson activities, toolkits, classroom learning kits, 3D printable files. And we'll show some pictures of those later on this slide. But those are the OERs we're going to talk about that draw attention to the many examples of mathematics and science in the trades. So the process of collaboration among teachers, faculty, instructional designers, and media specialists has resulted in several secondary benefits that will impact teaching and learning in both the K to 12 and the post-secondary learning environments.

Next, yeah, next slide. Back to you. Oh me.

BRIANNE:

So the STEM project where we have all these staples. We have the instructors here down in Lethbridge College trades. We have our teachers, we have our Centre for Learning, Teaching and Innovation. And we have industry partners and we've all come together and really collaborated to create some deliverables for K to 12 and for teachers to help inform and develop some skill sets and knowledge within STEM. And really recognizing the trades and what is going on within it. Some things that some people we are working with currently in our trades is some automotive service technicians. We've got heavy-duty service technicians, ag technicians, plumbers, welders, carpentry, and wind turbine with much more to come. And some of the really cool things we're developing. I'll let you go to the next slide. I guess this means go into the next slide.

Some amazing things are going on as we're developing this. So I just wanted to show you some pictures of these secondary benefits that are starting to arise of everybody getting together. In this picture, we're actually filming some videos for automotive service technicians here for STEM. And we got a teacher in the blue shirt and one of our technicians are auto techs there Colin, and they're doing a film on heating and air conditioning for elementary students. So this is for grade two. And we've collaborated with our CTLI members and AV team to have directors and filming and storyboarding. And we've had really a hoot together and it's been incredible to see how everyone has played off of each other and built these relationships and collaborated to create these things.

So as well, some other things that we've been up to is we've had all these teachers come onto campus here with all of our technicians for automotive and investigated some of the materials and tools that they're using. And teachers are coming and seeing how curriculum directly connects to this. And we've spent a full year around the sun working through this together. So this one was a power seat that was one of our very first projects here that we have done, where we took a power seat out of a car and really looked at the mechanics of it and had teachers come in and figure out how we could use this in the classroom to help inform students.

WARREN:

So, let's go back to the connections that we were able to make on this. So we have one instructor there, Dave, and we have three teachers. And those teachers teach grade six through grade 12, math and science at various levels. And so some of the connections that were made with this power seat. So in Alberta, we focus on electricity in grade five and grade nine. So we have the electrical component there. In grade seven, grade eight. We talk about gears and levers. And so you can see the different gears and levers that are involved in moving your seat up and down forward and backwards. Then one of those teachers, the high school physics teacher. And so we were able to go in depth when we talk about force in high school physics. So in talking with the teachers, it was really nice for them to see. They were surprised to see how much of their math, mathematics, and science goes into something as simple as a power seat module, right? So what we're able to span multiple subjects in multiple grades with this

one module. And for the instructor, they are able to see, oh, this is how it is addressed in junior high, in high school. And start to make the beginnings of those connections. So when I get my first-year students, this is the background, the mindset that they are, they're coming to me with. And what can we do to align what's currently being addressed and how it's being addressed in K to 12 education, and how we're teaching it and addressing it in our post-secondary program.

BRIANNE:

A really neat one where we had a huge group of teachers come onto campus. One of the first days that we started really diving into this project and involving some more people. And we had all these teachers come in and get a tour of the trades and really get to dive in and explore and meet instructors and see what's actually happening within our institution. Many teachers want to incorporate these things with it, like trades perspectives into their learning and teaching. But sometimes you just, you're not exposed to it. You don't know where to start, who to talk to, and what you could really do. And so this has given teachers a really giant opportunity to get that new knowledge

WARREN:

And build those connections, right? So we spent the first part of this day in the classroom introducing each other. What we do, what our role is. But then as you can see from the image, we went into the shops at Lethbridge College. And that's where the connections were really starting to come out. Right? Like Brianne said a lot of these teachers, they want to incorporate these authentic learning experiences, things that happened in the real world into their classrooms. And a lot of these teachers have a very basic knowledge and understanding of a trade. Some trades more than others. But being able to stand shoulder to shoulder with these instructors, not only gave them the opportunity to start building a network of connections that these teachers can call on or begin to foster by bringing those instructors into the classroom in one capacity or another, whether it's through a lesson that was helped design or a video or even in person. And then just having that individual to go to. If they do have a question about taking their content that they're supposed to teach in their particular grade and putting this trade spin on it, right? Looking at it through the lens of a trades individual.

So another thing that we're doing, so we talked about a little bit, some of these OERs involved videos. We saw the one set. One of them was a classroom toolkit. And so one thing that we've done, and I've done this in my own practice. I've taken some of these tools and I instructed using these tools. So for example, you see there in the middle, you see some feeler gauges. What I've done is I've used those to teach the addition and subtraction of decimals. I currently teach grade five and that's the first time that we work with the addition and subtraction of decimals to the thousands position. And so being able to show students that, you know what, it's not just a number on the board. It's not just something that I'm supposed to teach you, but I'm able to show them how we use that math in the classroom and how it relates to the world outside. So actually at that time, that lesson, I was working on a quad and I needed to adjust the gap on my spark plug. So for the activity in my class with these grade five students who are about 10, 11 years old, I had some spark plugs. And I said, You know what, these spark plugs

need to have a gap of 400th of an inch, right? Which on those particular sets of feeler gauges, I think they went up to 36 thousands. So they had to figure out different combinations of those leafs to get to that number. And I was able to take the feeler gauge and I was able to take the spark plug and see if they were correct. Right? And so for them, they are able to see, Oh, this is where I can use this math. Outside of the classroom. This is the connection. And for me, I was able to see my students, their level of engagement increase. Their motivation to learn more increase because the math became real for them. It was alive, right? And just that, it was that connection to, in this case, the automotive trade.

So here's another one. This is a kit that we're developing. Another OER. This came from the carpentry department. And so we're able to take this kit and I was able to take it out to three different classrooms, three different grades, and we're able to put together different activities that students could work through with this kit. One of them being at a low grade level. For us, it's grade two. Grade one, just being able to identify what the shapes are. Being able to distinguish between 2D and 3D. We're able to go to a grade four level in mathematics and we're able to talk about angles. So kids were able to measure the angles of these different shapes using a protractor. And then we took it to a grade seven classroom, where they have to make different combinations of irregular and regular shapes and add angles together and figure out patterns. So just another example of a kit that spans multiple grades.

Then this came from the idea of that power seat that we saw earlier on in the picture. This is a power window kit. So this one relates to grade five and grade nine science. And students are able to add a grade five level just identify the different parts of the circuit, whether it's the load, whether it's the power source, right? The fuse, batteries power source. And in grade nine, they need to be able to calculate resistance. So they perform some calculations. So this particular kit spans multiple grades as well. And the thing is with every single one of these kits, we had one or two instructors and one to three teachers involved in the development of these kits. And later on we'll get into more detail of how that happened. But being able to come in from a teacher's perspective and work with a content expert, who the instructors, they're those content experts and being able to see how the math and the science that we teach as a part of our STEM program, part of our curriculum. How it, how it connects beyond the walls of our classroom, beyond the confines of our grade, right? For me personally, it's been powerful to see how, like I said, this is grade five and grade nine, have a better understanding of how the science that I teach in grade five, how it has doubled back in grade nine, and how it's built up in grade nine. So the development of these kits has been awesome. Yes.

So how did we get here? So in order to construct these OERs and work with instructors and teachers and their development, we had to start somewhere. And thinking about my experience with this, like I said earlier, I'd been working two, two-and-a-half years with instructors. The first was a spark. That spark can be the desire to get out of the walls of my classroom, to get out of the confines of my curriculum that I'm supposed to teach and look for ways that I can bring in outside experts, that I can bring it outside experiences that are authentic. And for me, my school at McGrath, we're a project problem-based learning school. So what that means is that we try to integrate authentic learning experiences that tie the

concepts that we learned in the classroom to the real world. It also means that we give students a voice and choice in their learning in the projects and problems that we encourage them to work through. So this STEM PBL, project-based learning lends itself to the OERs because they are hands-on, like the learning kits, the 3D printing files, the toolkit items that we're able to see pictures of. And they're authentic because the videos show a shop with an instructor with different components, aspects of the trade. And they highlight the mathematics and the science that are in that trade. So this is the spark that the majority of these teachers came with. Those who didn't initially come with the spark were able to get it as they worked with these instructors. These instructors who, some of them did have the spark as well, to be able to take their trade and say, Okay, I'm teaching my, first time teaching first-year automotive or first-year plumbing. But where are they coming from? Having that desire to see where their students are coming from, not just where they're going. And being able to connect with these classroom teachers to see, okay, in high school you are struggling with this concept. I'm also struggling with that concept. Why don't we develop something that addresses this concept? So your students in high school, junior high, elementary, they have a firm understanding of it. And then when they come to us, this is something that we can build upon.

That leads us to the second part, which is this collaboration. So these resources. These OERs are a result of time and energy put in by instructors who are content experts and expert teachers who are content experts in their own area. It's a starting point for the majority of these OERs. Sorry, the starting point for the majority of these OERs is curriculum mapping, which involved making connections between the Alberta K to 12 education, our curriculum, math and science, and the trade. So we sat down in a room. We had our program of studies for K to 12 available for everyone to look at. We had teachers who represented those subjects at the various grade levels. We had instructors who represented the particular trades that we were working with at the time. And we sat down and we identified the strongest connections between our program of studies and the trade that we're meeting with at the time. And these strong connections, we classified them as connections that spanned multiple grade levels and or spanned multiple subject areas. So there were a lot of connections. There's a ton of connections, but there are some that are more worthwhile pursuing initially than others. And that's what the connections that we were looking for. And then from there we were looking. Okay. Would these connections be best suited? Being addressed by through a video or through a kit. Or what have you 3D printing file.

**BRIANNE:**

This one kind of warbly. You're doing great. We put this picture in here because we felt that it's best representing what we're finding as a result of the STEM projects. So it's like that drop of water of what our intentions and our goals were with this about how to inform teachers, provide resources, enhance the K to 12 learning experience with authentic real-world connections and influence in the decision-making for students. And so we have our goals, but then we're finding that it's rippling out. We are seeing some more things happening as a result of this and who's getting involved and how. And I think it's been really, really interesting to see how our intent has actually spread widely and encompassed way more than we have even yet to quite identify.

So we have some testimonials from some of the people down here in the trades about how it's changed them. And what I mean, how it's changed them is how is it really impacted how their practices has changed, how their attitudes have changed, and how they've changed their teaching practice and learning with students. I know from a teacher perspective, we can see are obvious consequences. But even on a, on the instructor side, I think has been really powerful and intriguing to see how they've changed their interactions with students, their view of K to 12 education, their dedication to making connections, and forming those really great relationships with each other. So for you today, we actually have a couple video testimonials we'd like to share. So if there's any trouble with volume or anything like that, we can work with it from there. So our first testimonials from our lovely Kevin Wiber, who is the Associate Dean of the Trades Programs here at Lethbridge College. And he took a few minutes to really explain what he's really been seeing as a result of the STEM project.

[VIDEO STARTS]

KEVIN WIBER:

Hi, my name is Kevin Wiber. I'm the Associate Dean of Trades here at Lethbridge College. My first contact with STEM occurred when we started building out the idea of authentic learning for our students in the K to 12 system. That was all about aligning the curriculum in K to 12 to what we do in trades and specifically the automotive service technician trade. I got to work on the alignment of the curriculum. I got to try and come up with some of the things that we could do that would show that alignment in that curriculum. And then we realized that it's a huge undertaking. That there's so much alignment and so much math and science in the automotive trade specifically, but in trades all around. We made a connection between the Lethbridge College trades instructors and the K to 12 teachers. And once we'd made that alignment and we brought them all together, that's when the unintended consequences really showed up. The teachers were absolutely amazed at the level of science and the depth of science that was included in the automotive service trade. And the automotive service instructors were much more aware of the challenges that are faced by the K to 12 teachers as they try and make the learning relate to something in real life. And that's been the unintended consequences that struck me the most.

[VIDEO ENDS]

BRIANNE:

Kevin has seen lots of those connections. The next one is one of our one of our automotive service technician instructors, Eric Mitchell. And he's been heavily involved in the project and done lots on it. So let's hear from him.

[VIDEO STARTS]

ERIC MITCHELL:

Hey, everyone. I'm Eric Mitchell from the Lethbridge College. I teach in the Automotive Program. Just a few of the things that I've seen in the STEM project and things that I've learned along the way is the usefulness of what K to 12 is teaching their students and how that translates into what we're doing in the trades. Now I have three young children myself, ages 10

to 14. When they come home with certain science projects and things like that. It's fun because I can now look at what they're learning and go with what they're going to be learning in the future. Because of things that I've seen and discussing with the educators that are involved in the STEM project. I personally was one of those kids that hated science, hated math, hated all that stuff. I'd, I'd much rather be out in the garage working on things, in the shop, playing around. Just because that's how I was, I didn't really see the need for, why do I need certain aspects of physics and stuff like that. Well, now that I'm actually here in the trade and now that I'm working with the STEM project, I actually see that those things that I've been doing out in the trade were actually things that I was learning about in high school and even back into elementary school. The STEM project has been great for me. I got involved with it very fairly early. I wasn't planning on getting involved with it just because I was brand new to the college. I was just my first year instructing as an automotive instructor here, fresh out of the shop. Felt like I was drowning in a lot of aspects. But getting into the STEM project really gave me the opportunity to get excited about furthering the students' education that are sitting right here in the classroom with me and out in the shop with me. And then taking that information and building upon it. Built these little boxes that are a replica of a power window out of the vehicle. And we can see how the flow of electricity in their Ohm's law. We can use Ohm's law, which I never would have thought when I was 16, 17 than I ever would have been using. But I use it all the time. I use it all the time looking for voltage, looking for a current, looking for resistance. And now with these fun little project boxes that I've got to build with myself and some of my other instructors here participating in the same project. We can now take that information, show it to the teachers that are teaching the K to 12. They get excited about it, which then in turn gets me more excited about it. And these are fun little projects that their students can play with. And there, I can also take them and use them in my classroom there. Now building these boxes. It's a lot of work. Building the projects is a lot of work. It's definitely not something that you can just sit back and expect will happen. But I feel that I've invested in other instructors that have invested their time into the STEM project because they have a love and a passion for the trades and for the furthering of their particular trade and watching their students grow. It's been great. I can't recommend it enough. If you have the opportunity. get involved with it. But again, it is a lot of work, but it is very rewarding work. Anyways, I appreciate the time that I've had to come and share some of my thoughts and feelings on STEM project and yeah, hopefully you guys will all have fun learning more about STEM project. Thanks.

[VIDEO ENDS]

BRIANNE:

Okay, so that was Eric Mitchell and then there's one more here. Logan Fulwiler, one of the plumbing plumbers down in the trades there. One of the chairs, and here's how his experience has been.

[VIDEO STARTS]

LOGAN FULWILER:

Hi everybody, Thanks so much for having me here to talk about the STEM program today. I would love to tell you all about how I've been involved with the STEM program and some of the exciting things that we're doing. One of the awesome things that I wanted to talk about was

why I got involved with the STEM program in the first place. And the answer is actually in the question, why? Why do students have to learn something? Why do they have to learn about science and technology? Well because in the trades we use it every day. For that they have to be able to see it. They have to be able to feel it, to understand it, and to want to be able to be involved with it. And the great thing about STEM is that they're giving us an opportunity to step in here and actually showcase our trades and give them a reason why they need to learn this topic. And it's just been such a rewarding experience for us to be able to be involved with the educators from the public school systems as they come in. And we're doing things like curriculum mapping and seeing where their curriculum lines up with our curriculum. And it's so amazing how many different areas that there's an alignment, that we see that what we teach our students is stuff that they'd been teaching their students. And now we can join these two concepts together and show them how the trades, these concepts relate to the trades. Then the other awesome thing is we're building these kits that are being sent out to the schools that they can use. And the kits are little projects that we've developed or built that can end up being used to show a concept or concepts to these students. Give them a practical reason of why we're doing what we're doing in the field. And having been part of that development has just been unbelievable. Like to give an example, we were asked to build the science kit. And many, many times we talk about pressure and temperature and we just expected that our students know it. Then because of the STEM project, we had to take a look back and go, how do we explain this to a different age group? How would we explain it to somebody who's younger? And it really set us back and go, well, maybe, maybe we need to be explaining this different even to our own students. So it gives you a different perspective as to what you're doing in the classroom. And I guess why I think this is so important, and if you aren't involved with it, I highly recommend that you do get involved with it. Why it's so important is that these students coming into the trade school, a lot of them go, man, I didn't know that there was going to be this much involved. And now we've gotten an opportunity here where we can go in and actually show them why they need to pay attention to these things when it comes around in their school. And what an awesome concept. So what do we expect to get out of this? Our students are coming into the classroom with a greater understanding of the topics that we're going to be presenting. Not only that, maybe the passion for those topics before they ever get into our classroom. And can you imagine how wonderful that would be for them to have that knowledge and that passion being developed at a young age. What an amazing opportunity that we're being given here. So my advice to you is get involved. For any of the educators that have ever said, man, I just feel like they're letting our students down or they're not giving them enough information about the things that we need them to know. Now's your chance to get involved and show them those things. Help build the kits that these students are going to be able to use to learn these concepts. So I guess from my perspective, it's been a wonderfully rewarding and just an amazingly educational experience. So if you haven't had a chance to do it, I highly recommend it. And once again, thanks so much for having me.

[VIDEO ENDS]

WARREN:

There we go. You do somewhat with the volume or are we good? We should we get it right? I think we're okay. So yeah, I'll just quickly add My testimony as a teacher, right, who's been involved from the teaching side, and I'm going to piggyback off what Logan said. In addition to teaching, I also ranch. I have a bunch of cows on a ranch that my wife and my family and I do. And I'm lucky to teach in a community that half of my students also live on farms, grow up on farms. So I've noticed that as soon as I bring in a farming concept or a ranching concept into one of my lessons, I immediately have the attention of 50 percent of my class because they have that passion already. And the other 50 percent who do not live on farms. Well, I would say that the majority of them have grandparents or aunts, uncles, cousins who live on farms and so their interests is peaked as well. So as Logan was mentioning, if we can tap into that passion that these students have, then their engagement and motivation increases. And like he said, how amazing will it be for you as instructors to have these students who come to you already engaged and motivated and eager to learn about the next step in their life's journey, right? And so for me, it's been nice. It's been amazing to bring in the trades, bring in the math and science at a young age. So these students can begin to make those connections and make informed decisions already at age ten, even at age seven in grade two. To say, Oh, that's something that is really neat, right? And that's how it begins. And then as they progress through their educational experience, they begin to say that's what I want to do, right? So it's been awesome.

What's next? So there are a few things. So in regards to the OERs, one thing that we're working on is a guest directory. These individuals that you, you've seen these instructors. Outside business owners and industry members we're inviting them to be a part of the guest directory where they can be directly involved in the teaching of how to use a kit and offering field trip opportunities to their shops or places of work, whether it's virtually or in person, or even offer to come to a classroom for an hour or a morning or an afternoon to address a specific concept that we're working on in a classroom. The other thing that we're working on is to include more trades. We started off with a few other trades that we're going to include as culinary, electrical, and other trades that we have here at Lethbridge College, So that's our planned next step. But, as you can see, there's lots of secondary benefits. And I think one of those, as Kevin touched on in his testimonial is that relationship building, being able to work with additional teachers and bring them in and bring in other instructors. And whether they're new, like Eric, fresh out of the shop, have young kids who have that desire already, or other instructors who, you know what might be a little bit hesitant or teachers who might be a little bit hesitant. But as soon as they get involved, they get that spark. So that's also part of our next step.

**BRIANNE:**

Let's point out where we are currently in our STEM initiative here at Lethbridge College. And so we actually wanted to use Mentimeter to find out a little bit more from everybody who's there today and their thoughts. So on your Mentimeter what words come to mind when you think of this project? And some of those maybe some words if you could enter some things that come with you as you're thinking of those testimonials and the information we've given you. Innovative. Yeah, absolutely. Give everybody about one minute. To see what people's thoughts. Creative. Relevance. Developing. These are wonderful. I guess I don't need to read each one out

loud. Oh, I love that word. Foundational. Rewarding. Yeah. Authentic. Connection. Great one. Which one's your favourite one, Warren? Which one do you think really encompasses at all?

WARREN:

I don't know if I picked just one but I will say I use authentic lots in my vocabulary. These other ones are adding to it, right? Synergy. That's good.

BRIANNE:

Awesome. Thank you. These are unreal words. Love it. Next thing we wanted to ask of everybody, if anything, what else is going on in Western Canada here? For the most part, I can't see who's all from where but if anybody else is doing anything else similar in their institution or if you have some youth initiatives going on in any of the programs that you're associated with. Some out there. Some of the other things that are going on at Lethbridge College down in the trades. They're really involved with youth initiatives. So we have some dual credit programming and exploratory programming. And I know that they offer lots of opportunities with school divisions to have teachers and students come onto campus and have tours and insights into the programs. Definitely curious to see how everybody else's are. We like the not yet, but we're moving that way. So there is some interesting.

WARREN:

Yeah, I think that's what this next slide is. Some of you are involved, but in what ways, right?

BRIANNE:

Yes. So if you are, what are you doing? And if you aren't, in what ways do you wish you were? Is there anything that struck you today?

WARREN:

I do a credit. It's good. I know that the students I talk to who are in dual credit are really excited about it. And their parents too, right. Awareness, yeah, it's huge. Exploratory learning. Presentations, getting into classroom. Meeting students in your shops. Yeah. As a teacher, that guest directory, right? A lot of it is where do I turn? If we have that point of contact, then that's the first step. When I was teaching. That was one of my greatest challenge was I just didn't, I wanted it, but I didn't know how to find the people to help me with it. Who do I reach out to and how do I get a hold of? Because it's a little intimidating to just randomly call industry partners to call a college and be like, somebody help me.

WARREN:

Your local plumber or auto shop. Hey, can we have a bunch of kids run around?

BRIANNE:

Yeah, it's intimidating. So the guest speaker directory I think can be so powerful in that way of really opening those doors for educators. There's lots there. Presentations. Yeah, The women in trades programs, that's wonderful. Okay. So you mentioned before that there's a lot going on and there's a lot involved in making this happen. It doesn't just come out of nowhere. Then Eric

really spoke to that as well. And we see that nobody else has said that they're doing exactly what we're doing with STEM. It is important to also address some of the things that are your barriers in the way. So if you have some things that. What are some of the things that you're currently in that you're finding challenging with what's going on, whether it's dual credit, women in trades programs, going out and doing information sessions. What are some challenges you're seeing?

WARREN:

Shop visits. I know for us a big thing is just scheduling. Being able to get teachers who are motivated. Yeah, I see motivation, energy, just scheduling those who are motivated, who do want to come in, instructors and teachers. When can we schedule them? The time, it takes a lot of time, a lot of effort, a lot of commitment.

BRIANNE:

We're finding lots of these same things that are starting to come up are the same things that we are facing and trying to overcome in our initiative as well.

WARREN:

And just to speak to some of these, like the one getting the trades instructors give time to help. I found that the administration that we've had here at the College at Lethbridge College have really assisted with giving us time, making instructors available, which has really helped, really benefited. The buy-in honestly, we don't have. Every teacher, instructor we talked to, we don't have that initial buy-in. And some are more involved, some want to be more involved than others. But I think what has helped, at least for me with teacher buy-in is being able to show them some of the things that we have done. Being able to take a kit into them and say, Hey, how would you, how would you use this kit in your classroom? And what the instructor side, being able to have them sit down with a teacher and just explore those connections seem to be powerful because then the instructor is able to see, Oh, okay, that's, that's how it's taught. That's where it's taught. And begin to make those, draw the lines between the students in the K to 12 and the students that they currently have. Social stigma around trades education. That's something that we are trying to address. Yeah. Is give these students the students eager and engaged early on about the trades. Yeah. Biases for sure. Yeah. Not knowing to reach out in K to 12 either. That is tough because you have someone has on the counsellors. Honestly, some counsellors are more engaged than others. So not knowing where to reach out, I haven't really pondered that so much. That's good. That is a good question.

BRIANNE:

These are great because some of those challenges that you're facing, we haven't faced, but we'll be facing. So these are great to know that they're there, That instructor time is also something like timing, scheduling is definitely one of those hurdles we're trying to overcome. The instructors that we have been working with so far are just incredible people and really passionate individuals. And they're doing this on their own time. And even during working hours, they're finding time. They're helping cover each other and help each other around in their areas to make this work and make this happen. It's been amazing.

WARREN:

I'll say I don't, I don't have an answer for reaching out to K to 12, but a starting point I would say is if you have kids or grandkids or relatives who are going to school, perhaps their teacher could be an initial start because the majority of teachers as instructors, do you want to give the students that they have the best education. And I'd say most of them agree that being able to connect it beyond the classroom is one way to give them a high-quality education. So I would say that would be perhaps a starting point with connecting to a K to 12 teacher. This is good.

BRIANNE:

Well, that's where we are now. Yeah, we're happy to connect with anybody anytime about what we're doing here at Lethbridge College and collaborate and give insights and advice and learn from each other. When it comes to this, to STEM and K to 12 collaborations. So feel free to contact us anytime at our emails. We also have this website, Learninginnovation.ca. This is our main Centre for Teaching and Learning website. And on there we actually have a STEM project initiative page where you can find up-to-date information. We have a website going live for February. So it's not live yet, but in the meantime, you can actually check things out there. We also have a podcast that we have done with Centre for Teaching and Learning that you can also find in this area as well. And listen to about our journey from what's happened since the beginning to where we currently are now.

WARREN:

And just to speak that website that's going to come online in February, it's going to house these OERs, the videos, the lesson activities, descriptions of the kits. So that's what's going to come in February. So I think maybe Josh Hill is out there today at the Trade Summit. I'm going to totally give a shout out to him. If he's there. He's one of the instructors at Lethbridge College and he's been a big part of the project as well. So if you are in-person at the Trade Summit, then you're more than welcome to give him a little chat too. And then, yeah, we know it's the end of our time here, but if anybody has anything additional that they would like to ask or to say, you're more than welcome to and then that's it for us.

WARREN:

Yeah, This has been a great opportunity. It's always nice to be able to share our experience, what we're doing and the impact that it's had on students, on teachers, on instructors, on industry members. It's contagious the excitement that is evidenced as we continue to work through this. Thank you, everybody. So yeah, I'll stop there and that's the end of the presentation. Thank you very much.

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