

**Transcript for Digital Literacy and Resilience in Trades Training (December 4, 2024)**  
**BCcampus webinar hosted on December 4, 2024**  
**Presenter: Jessica Gemella**  
**Host: Josie Gray**

JOSIE GRAY:

Hello, everyone. Thank you so much for joining us today for this webinar, exploring digital literacy and resilience in trades training. My name is Jose Gray and I am a manager of Open Education at BCcampus, and I am grateful to be joining you all today from Moh'kins'tsis on Treaty 7 lands, which includes the territories of the Blackfoot Confederacy, the Tsuut'ina Nation, and the Stony Nakoda. This place is also home to the Métis Nation of Alberta Region 3. BCcampus serves the British Columbia post-secondary system, supporting teaching and learning, open education, and other projects. As such, we support and collaborate with people who live across the lands of many Indigenous nations, and we are very much committed to the work of reconciliation. Are always working on our own learning and reflecting on how we are showing up in the B.C. post-secondary system and our impacts. Today, I am here to support our speaker and facilitate the chat. We are also joined by Paula at BCcampus, who is ensuring Zoom is working how we need it to, and we'll be doing all the work to get the recording edited captioned and out to you all. I am thrilled to introduce our facilitator today who is going to lead us in exploring digital literacy and resilience in trades training. Jessica Gemella is a faculty member at Vancouver Island University, VIU, in the Trades and Applied Technology Department. She has served as an instructor and chair in the Horticulture Program and has also worked in a pedagogy support role focused on trades. Currently on secondment to VIU's Centre for Innovation in Excellence and Learning, she is serving as a curriculum, teaching, and learning specialist, supporting teaching and learning initiatives across VIU. Jessica just recently completed her master's of arts in learning and technology at Royal Roads University with research interests in faculty development, digital literacy, and resilience. With that, I will hand it over to Jessica.

JESSICA GEMELLA:

Thanks very much for the introduction. Good morning, everyone. I am going to be sharing this hot off the press research in digital literacy and resilience and thinking about professional development to prepare instructors during changing times.

With respect and gratitude, I'm joining you from the Snuneymuxw Territory, located on the centre of Coast Salish territory on the eastern coast of Vancouver Island, and I'm on the main campus in Nanaimo. And today we're discussing digital literacy that relies on a system of digital networks that connect us across many lands. And in the chat, we'll be sharing some resources to think about how that relates to resources and there's a separation in many rural and Indigenous communities to accessing digital literacy skills, training, and professional development. And this is discussed in the research. And there's three links that are being shared in the chat and one is from Martin Klein that talks about the gap is a serious economic and has social consequences and implications for self-governance and partnership for this

divide in digital connection. That's something to think about as we move together in working together in improving digital literacy and resilience. The three links there were "Building Bandwidths, Preparing Indigenous Youth for Digital Futures." That's one of the links that talks about this divide and also connectivity in rural and remote areas report. That may be something that you could look at in the work that you're doing as well.

Okay. Well, I already had an introduction of myself, so I'm going to... My name is Jessica Gemella. I'm a first generation Canadian, and my late father was from Greece and my mother is from Germany. They were settled in present day city of Hamilton, and that's on Treaty 3.

And we have a map here to help us see where everybody's from. I know some of you may have a chance to put that in the chat. But there is a tool at the bottom of your screen that you can use the annotation tool to mark where you're joining from, and I'm curious to see where everybody's from. There's a heart stamp and you can stamp that on there. For those that aren't able to access that depending on what you're using to join us, you can actually add it in the chat as well. So I see we have a few in B.C. and people joining us from further away. Oh, how about a star? Yes, stars are fine, too. I particularly like hearts, but pick whatever stamp you like. We have somebody from Thunder Bay, Port William First Nation. That's a long way from where I'm going to move on to the next slide, thanks for sharing where you're from and taking a moment to think about the land that we are working together.

We can just use the chat instead here. If you would take a moment to just briefly in one or two seconds, add to the chat. Why did you choose to attend this webinar today? What do you hope to gain? When you finish that, you could take a moment to respond to somebody else. Maybe there's somebody else that has similar interests or something that you connect with. We have Tricia who works in accessibility services, and trades programs, Karina is supporting trades. Ryan works closely with trade instructors. It's good to see. There were some questions that were asked during the process that you registered or signed on. I'll do my best to answer the ones that I can that relate to the research as I go through. But I'll be sharing my contact information at the end, too, so you can always connect with me then and we'll have some time. If you can answer. If you want to ask questions throughout now as well. We've got Joni, who is, who has joined in, and Susan is a skills trades educator in health and safety emphasis. Great. I see Sally. Sally is a TVET ally. Trades are technical and vocational education and training. You'll see that acronym used in my presentation and Kevin's joined, he's an associate dean. That's great. I'll you can continue. You can chat with each other, but I'm going to carry on here and jump in a little bit into sharing research.

I'll talk about the background, the questions I was asking and how I went about doing the research. Briefly, some of the findings and the takeaways and things that we can all look ahead to.

Okay. So two things that are a focus of my discussion today. Digital literacy involves understanding and using digital tools wisely and responsibly, and digital resilience encourages

behaviours and attitudinal changes to better navigate stress in digital environments. And I just wanted to give a little bit of this background to how I came to this research interest. There were three studies that will also be shared in the chat. The first one I was reading about from the Digital Learning Advisory Committee has the B.C. Post-Secondary Digital Learning Strategy and there was a draft that came out and it's since been refined. I think the draft was in about 2021. It was responding to the COVID 19 emergency shift to online education. And it included guiding principles, strategies to aid technology-enhanced learning and prioritizes well-being and support of educators within all modalities. That had me thinking about well-being, and I think during COVID, I don't think I was alone and thinking about well-being in education. The second report that you'll be connected to through the chat is Vinden, Flynn, & Carson, and that's Sally Vinden. Dr. Sally Vinden I see that she's joined us today too. Together, they did some work for BCcampus titled "Strengthening Digital Teaching and Learning for Vocational Education and Training Practitioners." And what drew my attention there is that study had mostly conversations with instructors and that trades instructors were feeling overwhelmed, stressed, and anxious while trying to engage students in digital learning during COVID. Thanks, Josie for sharing that in the chat. The other study that really helped me think about questions and what I wanted to learn more about was a 2023 study called An Increasing Demand for Technology Use in Teaching and Learning. That was put out in 2023, and the key findings were there's faculty burnout and maintaining academic integrity pose significant challenges to teaching and learning. That professional development remains largely optional regardless of how the courses are delivered. The focus of professional development includes teaching methods, learning management systems, upholding academic integrity. So those were things that all brought me to think about these things about wellness and resilience. When I first started, I was thinking about digital literacy and wellness and then resilience. I refined that as I got started because resilience is a big topic on its own. I'm thinking more about refining that to really a digital context.

Looking at the literature just mentioned, but also doing some further investigation. There's limited research on teacher professional development for digital education in Canada and a general lack of research on TVET and that's trades or technical and vocational education and training pedagogy. That's the gap that I was looking to address.

I am going to launch a poll here in a moment and that's asking, how would you rate the overall digital literacy and resilience within your learning community and I left it open as a learning community. That might be in your faculty or your department or the office that you work in wherever you are. I'm just going to launch this.

While there might be a couple of people finishing up. In the chat too, if this is a question of unknown or even if you want to share this tool, BCcampus has a Digital Literacy Self-Assessment tool that may be helpful using with instructors or if you're an instructor to students as well to help self-assess. I'm going to share the results now. We've got mainly 73% in developing, so digital literacy skills are emerging, but there's still noticeable gaps, and then we've got some unknown and beginning skills in there.

And I think you'll see as I get through the presentation a little bit further along that developing or having unknowns or that there's this big range is something that comes up out of the research. So I will talk a little bit more about that emerging, but there's still noticeable gaps. But there are things. There are departments and individuals and systems that are all over the place as far as where they're at. Okay. Things I was looking at specifically in the research was, how can digital literacy, professional development be designed to enhance the digital resilience of TVET instructors in British Columbia? To reduce that stress and have more adaptability.

How I went about it. I looked at previous research, I mentioned those three documents that really led me that were a strong influence. I'll just highlight a couple of other things that came up through the literature review. But in contrast to academic education that prioritized intellectual development, TVET or trades emphasized practical skills and focusing on direct knowledge transmission and skills imitation. And that, That's in the background, which has influence now. What makes, which may make TVET also unique is that instructors come to teaching as a second career. They often transition from industry to education without formal training, and that may contribute to the perception that educator training isn't necessary. Although there is individual faculty development, there's broader system issues at play as well, and that things like TVET institutions often have a structure that allows teacher interchangeability to teach any class within a department. It limits teacher autonomy and may restrict opportunities. Also that the TVET curriculum in Canada is standardized based on occupational analysis and current trades. There are some parts of that structure that can make navigating and preparing for the future a bit challenging. The next part, the research is that I interviewed a select group of experienced participants from public post-secondary institutes that work within the trades and vocational education and training or trades in the context of B.C. It included participants from Camosun College, Coast Mountain College, Selkirk College, Thompson Rivers University, University of Fraser Valley and Vancouver Island University, as well as a representative from BCcampus and Vancouver Community College, who here in British Columbia provide provincial instructor diploma. They provide training and some specific courses for trades instructors. I mainly, eight of the participants were faculty developers. From BCcampus, VCC and teaching and learning centres from the institutions and two of the participants were instructors. I use the technology acceptance model and that helps provide guidance on how people decide to use technology, and it's based on their beliefs about if the technology is easy to use and if it's useful. That's something to keep in mind as I move through the presentation as well.

Perceived ease of use is influenced about perceptions of control, computer anxiety, playful, if it's enjoyable to use, and that it's actually easy to access. Usefulness, for example, some factors that might influence that if it's the subjective norm or the social, what's part of the social group, and social pressures, image, job relevance, and perceptions of quality. How people perceive what it is to be perhaps a good instructor. So what I found through the interviews is there's a whole breadth of instructors' needs and competencies. And that came up as a question from some of the registrants about, what is it that, what is it that instructors need? According to the

participants, the top educational technologies are the institution's learning management system, to be able to make videos, PowerPoint, to use Word, Excel, Zoom, and artificial intelligence and response systems, things that are used for quizzing and online polling. It was also pointed out by participants that they need skills and do applications like email, Word, Excel, and file management to organize things and to collaborate digitally. Those are the types of things, and that aligns with the trends across Canada. That's very similar to all levels of post-secondary and different disciplines and vocations. The other theme that I identified is TVET-specific in the sense that time and instructor identity is specific to the professional development design. Institutions face challenges in scheduling professional development because of the restrictive schedules. And that limits opportunities for instructors. Again, because these trades programs aren't as flexible in their timing often. Digital literacy often remains a hidden curriculum that it's not part of program outlines or program descriptions, and instructors perceive this lack of professional development needs because there aren't incentives for it. There's from a perceived, from a perception that it's not required. Also, the other, the other thing that is a consideration here too is the limited access due to digital infrastructure. Outside of the Lower Mainland, that it's not accessible for many to be participating in digital education.

Critical digital literacy is another theme, and this is about being able to access and integrate technology into teaching and to understand the implications in power dynamics and digital spaces. Things like being able to assess credible and reliable information, recognize bias, misinformation, navigate all of the copyright and responsible use. And thinking about representation in digital media as well. This was something that was interpreted as a theme that there is a need to improve critical digital literacy.

The fourth theme is meaningful connection for resilience. This being able to connect is a preventative factor and builds resilience. Part of the things that were discussed within that theme were things about boundary setting and flexibility, which there's a poll there. It came from discussing questions about how digital resilience of TVET instructors could be enhanced. It recognized the importance of connection and cooperation and connecting to one's own teaching practice and the meaning of that and supporting instructors in setting boundaries and practising flexibility.

Okay. I had some questions that were some questions and what I was looking at. And one of the questions is, What are the key digital literacy needs and competencies of instructors? Just to summarize that a little bit. I talked about some of the tool use, but it's broader than that and it's beyond technical skills. This digital literacy encompasses a deeper understanding of how to appropriately select and integrate technology with the intention of enhancing teaching and learning. That is often referred to as digital pedagogy, and it represents a whole range of teaching practices. Part of that is extending the role beyond being a content expert and having technical skills. It's making the shift from traditional instructors to facilitators. Using frameworks like the technological pedagogical content knowledge, and that can be used as a guide that helps instructors effectively integrate technology. We can talk about that more if

there were questions about that coming out. As far as what are the digital education requirements of institutions in designing this professional development? That TVET specific, there's a need for this and it's really about professional development tailored to the structured nature of trades programs. Working together with Skilled Trades BC, for example, here in British Columbia and working in partnership to integrate digital literacy into curriculum and professional development initiatives. What are the key features of digital literacy that will prepare instructors to succeed while supporting digital resilience? Really a main takeaway for this is this critical digital literacy and that there needs to be a focus on academic integrity and the ethical tool selection. This was also emphasized in the cross-Canada report. Also addressing connectivity issues outside of southern Vancouver Island and the Lower Mainland here in British Columbia are really important to providing access for remote and First Nation communities. Professional development programs can emphasize trauma-informed practices and resilience training and recognize that resilience applies to individuals and the whole system.

I am going to take us to the recommendations, which answer the question, How can digital professional development be designed to enhance the digital resilience of TVET instructors? And there are seven of them. What I'm going to do is just highlight a couple of things, but then we're going to move into breakout rooms and there'll be a link shared to the blog. As a breakout group, you'll be able to look at these in more detail and discuss them and then we have time to come back and have a conversation about that. There's seven recommendations. The first one is to design professional development opportunities that address multiple competencies levels. This recognizes the need that there's a broad range of skills and interests. Progressive training that covers basic to advanced digital skills, and this draws on this acceptance model the technology acceptance models to ensure that training, there's an ease of use to it and also that it needs to be perceived to be useful. The second one is initiatives to make educational theories and frameworks transparent. This builds on this first one that, there's the chance of having these multiple levels, but to work to be able to provide instructors and everyone in TVET to have approaches to how they might go about selecting technology and how they might go about integrating into their teaching practice. Again, that by exposing some of the background theory or work that's come before us, that will help the perception of that it's easier to adopt. Recommendation 3, develop facilitation practices to shift traditional teaching methods to digital pedagogy. This has a strong emphasis in collaboration and working with peers. Plan for flexible and accessible professional development. Things like collaboration with external bodies that guide trades programs in B.C., that would be Skilled Trades BC and others. Developing initiatives that bring them into the programs so that there are learning outcomes and things that recognize the uniqueness of some of the structures that programs might have. The fifth one is designing continuous and sustained professional development. This really points to the helping to influence a culture where it's perceived to be useful to have professional development, and this might help to have policies and dedicated funding and time allocated incentives to recognize professional development activities. The sixth is emphasize academic integrity and ethical tools, and there's lots of models that we can share to do that. As an example, there's one called Sections. That asks whoever's using it to think about student

needs, the ease of use, the costs, the technical support required, and how it will be integrated, the outcomes, the novelty, and the scale. These are all a series of questions that if you're integrating new technologies, you can be asking yourself. The last one is promote collaboration and resilience. And those might be things like extended professional development and peer learning collaboration. I am, I see there's a question from Susan in the chat about not hearing number 6, and you're going to have a chance now in your breakout session to get into these a little bit more. Josie has shared the link to the blog.

I'm just going to go ahead and share with you in the breakout room, what you're going to do, you're going to have about 10 minutes. As a group, you're going to decide which of these recommendations do you believe would have the greatest impact on enhancing the digital resilience of TVET instructors. While you're in your group, you're going to choose one person to report back and the reporting will be through a poll. You're going to be put into groups and you can refer to the blog if you need to further your discussion and we'll connect back. And I think we may even have time to have you talk a little bit about why you chose the one that you did. So you're going to head into the breakout groups now.

So I think everyone's back now. That's good. I am going to launch the poll so that I can learn about what you had to say here. Should be launched. We had three breakout groups, so we have three representatives responding on behalf of your group. And we're all finished now, so I'm going to share the poll. Share the results. Okay. So we have, we've got design professional development opportunities to address multiple competency levels. That's one group responded there. Develop facilitation practices. There's one there and then two for plan flexible and accessible professional development programs. Thanks for sharing that. What we can do if you're willing is for those representatives or someone from your group. If you want to share just briefly, why. What was it that you talked about in your groups that led you to that being the most important thing to do? And I think we'll just need someone to volunteer to do that.

BRITT:

I can go, Jessica. I was in a group with Stephen and Anwen. And I mean, I picked, for the group, I picked number four. We kind of talked about that it was hard to actually select a specific one because the thread that we were seeing through all of these recommendations is professional development. Yes. So we talked about how that continuous, flexible, and accessible professional development is important. And also how do you scaffold that into the already immense workload that instructors have. And also working with the challenges, I think it was mentioned earlier in your presentation about the teaching schedule is different for trades than other programs, and so there's some barriers there. How is this professional development being worked in, in a way that makes sense for TVET instructors in ways that might not be applicable to other fields, and really tying in the professional development to relevant industry needs. Yes, bridging those, that connection. It's not just digital literacy is important because it's a skill you need to know. It's like how is digital literacy and critical digital literacy relevant to emerging skills in...

JESSICA:

Yes. Yeah. I think in my experience too that this flexibility does bring along different challenges as well too because it may be a little different than the structures, the very structured approach that people are coming from as well. Yeah. Thank you very much, Britt, for sharing what your group discussed.

RYAN: I can go next.

JESSICA: Thanks, Ryan.

RYAN:

For sure. I was in a group with Tricia and Sally, and similar to what Britt said, we talked about a couple of them. I think like 7, 4, and 3 were kind of some of our focus. I think in the end, we said that 3 was kind of what we were looking at. And I think part of that came of the conversation also, like um here, when we put on sessions and workshops and things like that, trying to schedule these are very hard to do because the instructors in the trades programs are teaching all the way from usually the end of August until the end of June and then everyone's off on break and things like that. It's hard to find that time and that space. Another thing we found that we talked about a fair bit too, though, is that, when we come in as educational developers or teaching specialists from other areas into and have conversations with these trades instructors. A lot of them were receptive, but there's also that thought or that understanding or that underlying vein of well, this is trades education, it's different, It's others kind of thing. That was mentioned at the beginning, it focuses more on that skills application and things. One of the things that we started to do that we've done a couple of times here, that was a bit more successful because I've put on workshops on different tools and practices, things like that. I've had varied success with my workshops. It'll be like, Oh, there'll be a bunch of instructors or there will be literally me and one other person who showed up, and they get this one-on-one experience. We've done a couple of things now where they've had spaces where the instructors are sharing with each other, and that is powerful and impactful. So trying to switch professional development where there are spaces. Last year, there was a session that was done where the instructors from all the different schools were on a panel and shared their thoughts on engagement and how to increase student agency in the classroom and it was really well received, and so looking for opportunities to build in that space where they can come into that space, be supported. And yeah. Tricia and Sally, if there's anything else that I missed, please definitely feel free to jump in.

PARTICIPANT: No, I feel that captured it. Fantastic. Thank you.

JESSICA:

Then if we have someone from the last group? Okay. Well, I'm going to move on to wrap up if anybody wants to join in, we have a few minutes at the end. We can come back to that. But thank you for sharing your thinking and your discussions behind some of these



recommendations because there's a lot to think, and I think it's really important to connect with others to talk about that.

I'm just looking ahead here, that in designing professional development, that you've touched on this in your groups in your reporting back to think about individual instructors, but also what can the institutions be doing in external bodies because resilience is not just an individual thing, it's a whole systems an institution as well. It can't be left to instructors alone.

I think we're all talking about thinking about influencing a culture change, enhancing digital education and impacting policy and funding for ongoing digital literacy training and supporting instructors, digital resistance, and well-being during changing times. I thank everyone for joining today.

And I have my contact information. I'm at VIU, so it's [Jessica.Gemella@viu.ca](mailto:Jessica.Gemella@viu.ca), and you can see that through the blog, and I'm always open to further discussion or questions. And I wish you a good day ahead and happy holidays, whatever break you have through the winter. Thanks, everyone.