

Transcript for Meet Kolibri: Expanding the Reach of BCcampus Open Resources to Learners Lacking Internet Access

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Presenters: Harper Friedman, Alan Levine, Lauren Lichtman, and Jacob Pierce

HARPER FRIEDMAN:

Welcome to our webinar, meet *Kolibri: Expanding the Reach of BCcampus Open Resources to Learners Lacking Internet Access*. That's a little bit of a mouthful. My name is Harper Friedman, and I'm part of the Open Education team here at BCcampus. For those who cannot see me, I am an Asian man in my 20s with long dark brown hair and glasses. Okay. First, I would like to point out our event code of conduct, which you would have agreed to when registering for this event. If you'd like to review the code of conduct, I've put the link in the chat, and I can stick it in there again for your viewing pleasure. Secondly, is that this presentation is being recorded and it will be made available after the event, along with captions and a full transcript. Thirdly, is that we will be doing our best through this webinar on monitoring the chat, and we'll have a question period at the end of the presentation. So feel free to drop in your questions down in the chat and we'll answer them on the fly if we feel like it or we'll leave them to the end. Next slide, please.

And before we begin, I would like to acknowledge that I am joining you today from the traditional and Unceded territories of the Lekwungen-speaking Peoples, known as the Esquimalt and Songhees Nations and the territories of the W̱SÁNEĆ Peoples, commonly known as Victoria, B.C. I've been on this land for close to eight years now starting when I came to Victoria for my undergrad at the University of Victoria, and I've had the honour to live, work, and study here. As a first-generation immigrant and settler, I have the responsibility to learn about Canada's colonial history and support the work of Indigenous peoples. And a very small part of that is knowing whose land I am on and acknowledging that. If you'd like to tell us where you're from, feel free to share in the chat. Now I'm going to pass it over to my co-presenter Alan Levine to introduce himself and get us started here at the webinar. Alan, over to you.

ALAN LEVINE:

All right. Thank you very much, Harper. It's great to be here, and I want to get going as soon as possible to our guests because we've got an exciting show. Just to let you know that I am a little bit outside of B.C. I'm in what we would call Saskatchewan. I've had the fortune to work with BCcampus on several projects, and I'm fortunate to be here on Treaty 4 Territory, which is the home originally of the nêhiyawak, Lakota, Nakota, Dakota, Saulteaux, and the Métis Nation. I've been on this even less than Harper. I moved here five years ago and settled, and also feel very fortunate and have a little private habit of trying to restore natural habitat where I live, and that's how I pay homage to this land. Anyhow, we're here to show you and talk to you about something. We probably all came here, we turned on our computers, we hit Zoom, we logged in. We didn't think anything special about it. We used to always talk about going online because you'd have to go to some other facility or another room to go online, and of course, we don't

even think about it, but it's pretty important to recognize that depending on the stats, 37% or a third of the world cannot do this as easily as we can. And many parts of British Columbia, and you know you think obviously of remote regions where the internet hasn't been built out. But there's other situations where learners perhaps don't have that direct access to the internet. So that's why it's been part of a BCcampus project that I got to be invited to be part of to look at some solutions that are able to provide a lot of the rich experience of the BC Open Collection to people in these situations. We're going to learn about this really exciting platform today called Kolibri, you'll see a lot more very soon.

Just to go to the next slide, a little bit of audiencing, I want to ask you if anybody can remember a time that they spent without internet, when the electricity went out, you may have taken a vacation to someplace that was not, where you didn't have your devices or maybe just made a de Kolibri choice. And you can share about that in the chat or just talk about maybe three words, what that left you. And, you know, I can say sometimes for me, it was when the electricity goes out, of course, it's unsettling. But sometimes, you know, if I go camping or something like that and I leave the devices at home, it's actually quite freeing, but it's nice to have those experiences when we're not tethered to the internet. But then again, that's fortunate because that's my choice. And what we're talking about is trying to help people who maybe don't have that choice. So, obviously, a lot of the resources, and there's so many of course, I don't even have to tell you about them that's available from BCcampus. You could think of them as online first. They're designed to be accessed online. Although so much of the collection that are published in Pressbooks lend themselves to be distributed in print form or digital form that could be downloaded that you can actually partake of them without having access to the internet. If I can go to the next slide, I think I have that little screenshot. Skip that one.

You know in Pressbooks, if you do a printout version of a title and there's something like H5P or an embedded YouTube video, you get this and it helps. If you say you can, I can just go to this URL and get it. But obviously, if you're there in a situation where that URL is not anything you can do something with, you're missing out on a piece, and we're trying to find solutions that can address this, not necessarily 100% replace it, but at least do more to the learner than just presenting a box that says, "You can't really do much with this link." So now we're going to get a part of this project, product, a great project from an organization called Learning Equality that we'll hear about. It's a software called Kolibri, and it's used around the world. I like the way it's described. It's an offline-first approach to online education. And we'll get a little chance from our friends and colleagues here at Learning Equality to get an understanding of what it does. We'll get a chance to show what we've been doing to some of the BCcampus to make it available in this platform. Also we're skipping the traditional, "Next slide, slide, next slide" presentation style, and we're going to do this conversationally. Finally, I want to introduce from Learning Equality, our guest, Lauren Lichtman and Jacob Pierce. I'd like just a chance for them to give a little where you're from what you do at Learning Equality and maybe what is the most exciting about the Kolibri platform. I'm not supposed to say platform. About Kolibri for the work that you're doing.

LAUREN LICHTMAN:

Fantastic. Thank you, Alan and Harper. Thanks so much for having us. My name is Lauren. I lead partnerships and strategy at Learning Equality. We're a non-profit organization that's a little over a decade old, and our organizational vision is to create an equitable world in which all learners develop their own agency, create positive transformation, and flourish. And part of the way in which we do this is through the development of Kolibri. So we're a team of software developers, designers, educational specialists, impact evaluation specialists, and so forth. And together, we are able to support a global user community that has adapted our products that are free and open source. So really excited to tell you more about what we do here today and thank you again. Okay. Oh, and what excites me about Kolibri. I'm sorry. What I love about our work is how people-focused we are. So we make sure that needs are at the centre of everything that we do and we're driven by needs, which is one of the reasons why in the development of Kolibri, we are focused on offline first teaching and learning. So we really think about the contextual realities when the internet doesn't exist and design specifically for those user needs. So that's something that motivates me about our work. Over to Jacob.

JACOB PIERCE:

My name is Jacob Pierce, I'm in Bakersfield, California, USA. I'm a senior software engineer with Learning Equality, and I've been with Learning Equality for about five years. Lately, I primarily work on writing code for our Kolibri learning platform, but I've worked across many different parts of the work that we do, technical and not. I'm really excited to be here to talk to everybody about Kolibri. I think the thing that is most exciting and motivating for me as a software developer is all of the new stuff that we're continually adding and how we're continuing to use and leverage our design principles and our theory of change to develop our software to meet the needs of people across the world.

ALAN:

Great. We'll certainly get to I want to get to hearing, obviously, the situations and scenarios that make Kolibri effective and we hope to get the audience involved in thinking about what scenarios and situations might be of interest or value in British Columbia. But first, can we get just for people who may not have heard of it or seen anything about it. Can you give me the “explain it to my mom” version of what Kolibri does and you can say, you can demo. We'd love to hear it just to give a picture about how Kolibri works.

JACOB:

Sure. Yeah, a mildly canned answer is that Kolibri is a set of tools that are designed to support offline teaching and learning. It's designed to empower people who don't have internet access or who have limited internet access, and/or people who have limited access to technology to have equitable access to open educational resources. So we design Kolibri with the ideal of community ownership in mind. So our tools support curriculum creators, educators, learners, and program admins, all to use Kolibri to serve their particular needs, whether that be like a formal school setting, an after-school program, supporting refugees, self-guided learning and any number of other settings.

ALAN:

Can you give an overview, where in the world that Kolibri is used? I mean, it's like everywhere from what I understand.

JACOB:

I mean, I don't know the exact. I think maybe Lauren would know better some numbers on that.

LAUREN:

Yeah. So Kolibri has been installed in 220+ countries and territories. It's reached the far corners of the globe, and we only know about an instance of Kolibri existing if it touches the internet. Not all instances of Kolibri ever touch the internet, and we have this completely offline access and distribution model, which means that you could take Kolibri from B.C. and you could physically fly it on a plane somewhere and then someone could hand it to someone else and it can distribute completely offline, and then Learning Equality wouldn't know about it. But based on what we do know, we know that there's really broad reach across the world and our products and tools have reached a conservative, an estimated 10 million users. And the way the use case in which it's been used really range. So ranges from formal learning programs within schools, primarily focused on K–12. It could be used in after-school programs, libraries, at home settings, orphanages. Here in the US, where we're headquartered, it's primarily used in the incarcerated facility context. So there's quite a wide diversity of use cases.

ALAN:

And so more or less you need a device to be in an offline location to act as like a local server, if you will, or a local wireless network. And so what are the schematics or the flow for creating a place where Kolibri can be used? And what do you need for that?

JACOB:

I think that some of the slides that I've got prepared might be good to just jump into to take a look at real quick.

ALAN:

Absolutely. I didn't mean to say you can't use slides. [laughs]

JACOB:

No, no, no. So does everybody see my slides here? All right. I didn't hear anybody say no. Introducing Kolibri. So, I'm going to go over a little bit about the platform or the solution and how it works. So some of the things that we mentioned offline first, access, and distribution, including what I think they call the sneaker net, which is what Lauren was describing where you would take a hard drive and just deliver it somewhere to provide access to content and to the Kolibri learning platform. And we also have different situation scenarios in which syncing can be of use. Kolibri is designed to be accessible and to work on all the technologies as we can manage. We try to make sure that the users with lowest tech will have access to the platform.

So to your point or to your question, Alan, kind like what's the flow here? Starting with a curriculum designer, they'll go into our Kolibri Studio tool and add educational materials or select materials from our library to add to their own channels. Then staff will set up that hardware. So in this picture, you'll see they're setting up what would be the server, which is just a computer that is running on the network connected to the router, and it's running the Kolibri learning platform software. And then the devices can be connected to it through a web browser, whether that be on a tablet or a phone.

This schematic, I think is a really good example or just a diagram of how this could work. We have the router providing Wi-Fi connection to the student devices, and a teacher's laptop can use Wi-Fi or a wire to the router and the server is there on the router as well. Because they're all on the same network, they can talk to each other.

This picture is a real-life example of that happening. So we have our server. We got the router. We have learners using devices to access it there. Hopefully that answers, I think that answers your specific question there, Alan. I'll have to keep going there. I feel like I want to.

ALAN:

No, show us more. I think it helps to see some of this ports together.

JACOB:

I think I just have a couple more here, but yeah, how does it work? Starting with an admin, once it's set up, an admin will go into the Kolibri learning platform and create classes, users, accounts, and they can set it up to sync data, and that can sync to other facility devices, or it can sync to our online portal called Kolibri data portal. Then a coach or a teacher can use the content that's available to create lessons, create quizzes. They can track learner progress and see if learners are having a difficult time with a particular question so that they can get specialized educational support to learners based on their needs. And so then learners engage in that self-paced learning, going through the assigned lessons and quizzes and getting their feedback on their assignments. So that's the flow, basically.

And here's a few of our implementation model examples. So, you can learn on the far right here, we have learners who have tablets, they take them home and they take them to school. And so anytime those tablets come to school or to their program, it will connect to the network and sync anything that they've been doing on their tablet at home to the server at the program. So then the coaches and admins can see what progress they've made, even though they made that progress fully offline at home on their device. Then we also have self-paced and autonomous learning and all sorts of stuff.

LAUREN:

Yeah. And just to quickly jump in. I think one of the benefits of showing here the different implementation models is it really speaks to the flexibility and adaptability of Kolibri. So when we say we design for the needs of learners when there isn't access to the internet, we're

thinking about the other contextual realities that exist in those situations. So for example, in a low resource classroom, there might not be sufficient devices to have a one-to-one ratio. So having a rotation model could work really well to work within the limited number of devices. It also gives time for practise outside of the platform. Maybe there's only one device and having the ability for autonomous self-paced learning makes sense. Kolibri can run on a variety of different device types and on low-cost and older devices. So the important takeaway I think from this slide is that we've identified lots of different sets of modalities where Kolibri could be used. Such that it's flexible, it can respond to the different needs and that we can access and support learning offline. It isn't just about access to content, but as Jacob was sharing in terms of how the educator supports. It also allows teachers to be able to provide either synchronous or asynchronous support, but again, completely in an offline setting. And so that's part of what you're seeing here with the different implementation models.

ALAN:

So you're able to see how much of the lesson learning material that the students have gone through, and there's also some assessment tools that are built into Kolibri so you can check that progress as well. That's the kind of information that's synced back if you use that modality?

JACOB:

Correct. Yeah. So lesson activity, but also content activity. If you're just exploring the content on the Kolibri server, then your progress is trapped. And so you can also go but learners can go back and find where they were in a video or in a document and stuff like that, too. But yeah, all that information is synced. For example, curriculum designers might want to know how well their resources are being used, and they might want to know how long a video is being watched for or something like that, and that data is also stored in and saved and synced.

LAUREN:

Yeah. And differing from some other offline tools, not only are we collecting all different types of data related to learner interaction, time spent, quiz attempts, whether they use hints, how often teachers create lessons, we track all of that. But then we also have mechanisms to be able to collect that and then be able to analyze it. So it's not just like the data exists, you can't really easily access it or you can't use it. But we collect everything, and then we reveal it to different user types at different points to be able to make actionable decisions. So learners can track their own progress, and what you'll see when Jacob demos in a bit is how they can then track their own progress by seeing what lessons they completed or recent videos they've looked at, for example, and then educators also have these real-time coach dashboards where they can see how individual learners have progressed through content. And admins can be able to access all of the aggregated data through spreadsheet exports. So we give the data to different users based on their needs and so that they can use it to make informed decisions about either their own learning journey or to inform programmatic decisions.

ALAN:

And even at a small level, so first of all, I'm using a laptop from 2013. That's my test server. But, you know, just as a simple thing, when you come back to it as a user, you log in, it shows you right where you left off. And so even that small bit of affordance is something that you don't see in a lot of the other offline tools.

JACOB:

One thing that we want to ask is, what are the interests from BCcampus for using Kolibri? Like with everything in mind that we just talked about with the capabilities of Kolibri. What does BCcampus hope to achieve?

HARPER:

Yeah, I can speak a little bit on that. Alan, you're welcome to jump in afterwards if you want to expand upon it. But at BCcampus, our mandate is to provide teaching, learning, and educational technology, and open educational support to the post-secondary system in British Columbia. And as part of that, we have supported and published openly licensed textbooks and really different, different open educational resources. But mainly, we've been kind of focusing on textbooks, and these textbooks are on a variety of subjects, aimed at post-secondary learners, as well as some adult basic education level content. And so Alan kind of touched on this earlier, but on our side, we mainly use Pressbooks to host and publish these textbooks and make them available to everybody. But to access a lot of the content, such as the videos, the audio, and interactive exercises in the book, you need internet. And like you showed, you printed out, you have the link, the hyperlink that you can go and access those exercises and content, but, you know, you need internet for that. And so what we hope to achieve using Kolibri is to make those elements available to under-served communities, specifically those in Northern B.C. with little to no internet access and just continue to try and strive to give equal access to everybody to these resources.

JACOB:

Yeah, I think Alan had mentioned that those links were going to H5P exercises in a lot of cases, and one thing about Kolibri have integrated with H5P so that progress tracking from H5P and their content will work with Kolibri as well. So the integration of H5P stuff with Kolibri.

ALAN:

Yeah, that's exciting. It's part of a new project at BCcampus that's looking at this. It's like the most basic of accessibility issues of being able to get to the content. And so this is one project we're doing. There's another project where we're trying to find ways of representing H5P when you do use the print version because, we don't often think about it, but there is a substantial amount of print use of this open content. Again, it's trying to create an alternative for the H5P, if you have the pure print version. But this is a whole different situation. More or less our model is first. We might be doing this, not the exact right way, but we're looking at the content and trying to make it to see how it will work and integrate with the Kolibri platform. Then at the same time, while we're having this webinar is we want to start talking to the community here

and start having some ideas or senses about where this might be appropriate or of interest to use in different parts of British Columbia. So we didn't actually design that in advance, and so we want to start getting the word about what we're doing. And so trying to at least set it up so you can see the potential of what it does when it becomes available in the Kolibri platform.

JACOB:

Okay. So if I understand you correctly, then there's, you know, the textbooks, and then they have links, but then there's an alternative print version of what would be the link as a supplement or like a replacement for the H5P exercise?

HARPER:

Yeah, that's correct. So through Pressbooks, we're able to export the main kind of main version of the textbook is the web book. And that's kind of where you have the most functionality where you can go and you can click on all of the links, and you can do the H5P exercise and watch the YouTube videos or other kind of content there. But with Pressbooks, you can export into a bunch of different export types such as PDFs, and ebooks and that sort of thing. And we also have a print version available, so people can go online and purchase, like, a print copy of the textbook. But yeah, in those export versions, because we can't kind of export the content, like the H5P exercises and stuff to a print PDF. We currently have just like hyperlinks, where those exercises would be. So in place of H5P exercise, we have a little text box that says, like, "Hey, there's a H5P exercise here. Here's the link where you can find that." And so for those users that use those export versions, they have to have that extra step of being able to access a device that can run these exercises or these YouTube videos and that sort of thing. Then they have the extra step of having to go to that link to the textbook to then to use that activity or resource or whatever it is. Yeah, that's what we're trying to get away from. We're trying to give those users that have those internet connectivity issues or device issues, equal access to those resources.

LAUREN:

Yeah. That's awesome. That's also where Kolibri can play a key role because it allows you to organize the content to be able to have multiple content types alongside one another and then be able to track how it's being used. I remember Alan when we first connected in the fall, we were talking about the potential use cases, and so to echo your point earlier, I'm excited for this group to come together and brainstorm different places where the content can be further utilized and extended by the nature of being able to access the books offline.

ALAN:

I will add that we'll show this. It's not like you take because you get is a giant PDF. And it's not like you take this, oh, it's all Kolibri. Now you can get the textbook experience. First of all, you have to keep in mind that in these situations, you're providing this content over pretty low bandwidth local networks. So it's not fiber optic speed. And so the content needs to be in sliced and diced into separate pieces in a sensible order that makes sense. And so that's what we're finding in our first efforts to find out how to piecemeal the books into a structured sequence.

Also, which I think we should come back to later. It's not like the textbook is all you get. The Kolibri library has many other resources. There's the phET simulations, there's Khan Academy videos. There's quite a bit more, and so you have the ability to do the famous OER remix. And so it's not just saying you have to use the textbook as a whole piece.

JACOB:

Okay. Could you share more than about the types of content that you'd want to be adding? Like what's the nature of the content?

HARPER:

Yeah, for sure. So for now, our main thing that we want to do is add our openly licensed textbooks to Kolibri. And I think most people who know BCcampus know what openly licensed means, but in the kind of very condensed version of explanation what that is. It means essentially that these books are open to everybody to access for free, and depending on the license, you can also, you know, adapt and remix the content. So that's the advantage of that. And ultimately, we want to add 90 titles into Kolibri, all of which were published by BCcampus. These books range quite greatly in different subject matter and are either at a post-secondary level or an adult basic education level. So some examples of the books that we want to add are the three math for trades textbooks, obviously, for the trades. In the sciences, we have one example is a book called *Concepts of Biology* first Canadian edition. Another book that we have for business is "Principles of Marketing," H5P addition. And for adult basic education, we have the "BC Reads, Adult Literacy Fundamentals," English series. And so kind of again, many of these textbooks would greatly benefit from this offline rather, accessibility of Kolibri. For example, the *Math for Trades* books, they have H5P interactive exercises, they have videos showing how to solve one of the math problems. And explaining different concepts. And then they also have an audio book version at the top of each chapter where the authors have recorded themselves reading out the entire chapter. And that's a great thing that they've done for accessibility as some people, you know, like to have the kind of audio version and not just, you know, have it read out by, you know, text-to-speech person. But obviously, that doesn't translate to if you're using the print version, so that's something that we would like to make available in Kolibri. And yeah, I'll be posting links to these titles in the chat after I've stopped gabbing. But all of these are available on the B.C. Open Collection.

ALAN:

That's good. I started copying and pasting and I wasn't fast enough, Harper, but we'll catch up on we'll share them later. I think maybe it'd be good to give people a sense about what Kolibri looks like. And so I think Jacob is equipped to do a demo and screen share what it looks like to actually access and interact with this in the offline environment.

JACOB:

All right. Can you see my screen? Yep. All right. Cool. So I'm going to go through Kolibri as three of our different user types, and I'm also going to briefly show off some of the abilities or some of the things that we can do with Kolibri Studio. So first, this is Kolibri the learning platform.

This is where learners, coaches and coaches would get together and interact with the educational resources.

So starting off as a learner here, I log in and I see my classes, my lessons, and my quizzes that are assigned to me. This is the home tab of the Learn section of Kolibri where I can review this. Well, this is just some dummy data, but here's a quiz that I created with real content just to show an example of what this looks like. You see it tells me how many seconds I've spent doing the quiz, and I'll submit it with unanswered questions to get my terrible score. See my report, how long I took there. In addition to that, we have the content library. So this is content that an admin would have loaded onto the Kolibri learning platform server. I've loaded a few panels here like open sections with a couple of bits of resources here, a lot of astronomy reading that I'll be needing to do. Some student resources. And on the left here, we have our search. So these are the types of contents that are currently available on my Kolibri instance. So we have things like practice where I can practise my basic math, which is where I got those questions for the quiz, or I can look up videos. One thing that you're talking about, Harper, with regards to accessibility is that I wanted to show is we do, we have all these different trans captions in different languages when they're available, and Khan Academy is obviously very good about making their content super accessible. But we also have it set up with a timestamps transcript as well. So as you're watching the video, you can see the transcript of that video in your language of choice, and you can click to that particular part of the video as you go through. Now obviously, this won't be on every single video, but when available, you know, that might be something that would be worth considering with regards to how the audio readings combine with the books. Yeah. I think that's a pretty good overview of what the learner can go through here. Of course, I can also add bookmarks in case I see something I like in that library. Back to it. One thing that's important to note here is so if I go here and start interacting with this. You'll hear learning about charges. Let see this up here. It says "In progress." So the reason I just wanted to show that in particular is because once I go home. There we go. Recent. Now I can see what I've been looking at, and it'll take me back to where I was in a book or in a video. So this is all done offline. Any phone that's connected to my Wi-Fi network can go to my server and access this content, and all of my progress is tracked offline.

So let's jump from the learner's experience to what a curriculum designer might experience using our online tool Kolibri Studio. So trying to set up to clarify between what is offline and online Kolibri Studio is where that OER remixing happens. For example, I can make this demo channel. and we do have a public library of content that you can use to create your own remixed channels with. So, you just can click into any of them and it's all of the channel contents organized, however they are. And so if I'm doing an English channel, I can select it and add it to my clipboard. I'm just doing that for a quick example here. If I open my clipboard. Now I have Blocky Games there, which is pretty sweet. You can do this with any of the channels that are there. And when you go to make your own channel now, I go in here and I can edit, I can go to my clipboard, select that, and move it into my channel. So this is probably not the way that you would want to go about doing this particular thing. I am not a curriculum designer myself, but just showing off the abilities here. So from here, now that I've added this content, I can

publish this. Hit Publish. One thing I think is important to note here is that when we do hit publish, it does not mean that your channel will be on that library. Our library is a curated set of channels. So anything that you make in Kolibri Studio is only going to end up being available by way of this token. And so I think now we'll hop out of Studio, the online tool, back into the offline learning platform. And here you will sign out. And jump back in.

So here you can see these are the channels that I as the admin had imported previously. Now I can hit Import. One thing that might be interesting to note here with regards to content and how it can be transmitted is we have our online resource. So if your Kolibri instance does have access to the internet, then you can import content from Studio, which is what we're going to do here. But that sneaker net example of having a hard drive with Kolibri content on it, and you take it somewhere that doesn't have internet. If you hook that up to the network, then Kolibri will be able to find it and import content from there and save it there. But just real quickly, with my token that I had copied in Studio because my Kolibri is connected to the internet. I can go in here and import all that content. From here, as the admin, I can look at the classes. There's a couple of classes with the coach. I can add users. There's some settings that we can update. I can enroll or disenroll coaches and learners here. And as the admin, I do have access to everything here. But one thing I want to do is demonstrate what a coach might see.

So as a coach. And now, when I log in as the coach. I don't have access to device or facility. I just have access to the classes to which I'm assigned as a coach. And this speaks to what Lauren was mentioning earlier with regards to how and when we share data to users based on what they need. And so in this case, as a coach, I just need to know what classes I'm coaching and what the learners are doing. So we can see here that our student completed basic math with a 0%. Yeah. And so they can view reports of the quizzes, they can plan and create lessons. Now. I'm going a little fast here. So now I have my lesson created. I go on to Manage Resources, and I can select from the different resources that are on my device. So. Yeah. So that's kind of the flow, I think. I guess I'm kind of running out of steam in terms of where I feel like I should go next. I just covered everything that we wanted to cover.

ALAN:

No, that's really good. So essentially, you know, there's a portion of work that you have to build while you're connected. And then you're putting it on a device or figuring out some way to get it to location, but still it's interesting there as a coach, you can sort of create your own sequence out of whatever content you've made available. So again, that's what makes it a pretty flexible solution.

JACOB:

Yeah. I can come in here and pick any resources I want from my lesson. Anybody assigned to this class will see that. Sorry. Go ahead, Lauren.

LAUREN:

Yeah, I think it's also relevant to mention that we're continuing to build Kolibri. We continue to roll out new features and make changes based on the feedback that we're hearing from our user community. And one of the things that we're working towards now is actually the ability to import content locally, so you can essentially bypass Kolibri Studio for individual implementations. So for example, you if a curriculum designer pre-curated a channel on Kolibri Studio that they wanted everyone in that their organization supports to use. Then a teacher can say, "But I created a fantastic lesson plan, and I also want my students to be able to access this or a PDF that supplements." What we're working towards is being able to import that locally so that you don't need the internet at all. That's again, going back to our point about flexibility, it's critical for us that we leverage connectivity when it does exist, but we're not taking advantage of it and that you have a really seamless quality experience offline. And I know Alan, you put this in the chat, but it's so important to underscore that Jacob did that quite quickly and showed you all the features, but it ran fast. When you're not reliant on the internet,, you know, the experience can be really quality and you don't have to worry to buffer a video or if the simulation kind of doesn't work and stops, and that can be really discouraging to learners. And as we think about digital rights and access to digital literacy, having that really quality experience that's consistent is critical for our learners and learners without the internet deserve that as much as anyone else. And so it's really important that that experience is a strong one. Yeah. Any questions from anyone too on functionality or why we designed things a certain way? It obviously looks a little different than an online learning platform, but we designed it with a specific set of user needs in mind and making sure that those teaching and learning needs are met. I don't know, Alan and Harper, when you saw Kolibri for the first time, were there elements of this that really spoke to you or questions that you had that you think others might be thinking right now?

ALAN:

You know, it's a different way of thinking about your content, and that's one of the things that I've been working through and I'll demonstrate very quickly some of the stuff that we've been putting together is that almost, you have to think there's like it's a sequential structure, you know, you organize your content into folders and create ways that people can get to use it. And so it's a little bit different from, you know, the format of, you know, in a Pressbooks, you have a table of contents, although in Kolibri again, when you enter into a collection, you don't have to start at the beginning and paste through it, so you can jump to any part. So that again, is something that appeals to me. For us, it was really well, for me, I say I'm excited that you can just run the H5P natively. And we've also been looking at the ability, there's a fair number of embedded videos, which, of course, get left off when you're not online. So there is the ability to export them as video file formats or audio as well and have them available within the lesson. But it's been this decision of Okay. We have a chapter from an open textbook. Sometimes the H5P is used at an end of chapter quiz. That works out well. You have the chapter, and then the H5P comes next, but sometimes in the middle of the chapter, you've got the interactive bits, so we've been going with the model more or less doing a chapter size bit of content, so it's not too big to be transmitted and then providing any ancillary media to follow that. So a learner could

choose to go through those if they say, "No, I understand this. I don't need to do the H5P" and then move on. But I think that's been the challenge for me is figuring out how to organize the information, starting from sort of a book flow content.

LAUREN:

Yeah, definitely. It's a little bit limiting and sometimes to have this top tree hierarchical structure, but it does also make it a little bit easier for those with less curriculum design experience to be able to put together something that is easy to follow, makes sense, and also follows a more traditional hierarchical structure of a curricular document. So yeah, there's a bit of a give and take there. Go ahead.

JACOB:

Just one notice too is content despite the hierarchical structure, can have lots of metadata put onto it to aid in searching and filtering and finding things that you want as well.

ALAN:

Absolutely. And where did my thought go? It just went out my head. Let's see. I will try to find my thought. Should I jump to Well, I know, I want to say this first and you brought this up when we were talking recently, Lauren, is that I've looked briefly. I've always had an interest in these various offline internet solutions. Some of them require quite a bit of technical know-how to set up. You have to do a lot of command line stuff and configure routers and things. And I've gotten the sense that Kolibri is designed so at least on the ground. I mean, you have to have a little bit of understanding, but it's not like you're having to do some deep dives into the technical stack to get it working.

JACOB:

Yeah. Our teams put a lot of effort into designing a tool kit that provides all the resources necessary to help people who are low digital or tech literacy, to be able to get up and running with Kolibri by setting up any of the various implementation styles that we've discussed previously. We provide resources that will aid people in getting things set up for sure.

LAUREN:

Yeah. With the latest version of Kolibri, we spent a lot of time on the design for onboarding, such that individuals can also get set up on their own versus organizations, which is really who we had targeted previously. We consider Kolibri to be low-maintenance tech. It's not high tech necessarily, it's also not low tech. I think there's some evolution there we were thinking about AI applications, but it's essentially plug and play. But then because of its flexibility and depending upon what hardware you have or the implementation model, there might be some things that you need someone technical to support you on, but it's not a requirement. Someone can download Kolibri or get it installed on their device and just get going with it. There's very little that you have to do to be able to set it up. You definitely don't need a computer science degree, which is critical. But there are solutions out there that do require that and they're highly customized and that meets a certain set of needs as well. There's lots of

great options and Kolibri is the one that fits in this box of easy to set up and use and being really flexible at that.

ALAN:

And it's interesting to think about. I know it requires the ability to have the resources and budget to do this, but the idea that a device, a tablet, could be sent for a learner to go home and learn independently, but then maybe return to a place where they're getting learning support. And that's an interesting model that it can be completely self-contained. You're more or less giving them a little version of the Kolibri application and they're running it off of that same device. Is that how it's working?

LAUREN:

Yeah, exactly. And I think it takes a bit of rethinking about what's possible because we're so used to people who are internet enabled are so used to using the internet and aren't necessarily thinking about what servers are, particularly less tech-oriented folks. And so I think we just need to break the mould a little bit in terms of what are the expectations. But yes, you're totally right, and all your data and content is stored locally. You're kind of limited or by the size of storage on the device, for example. It is a bit of a different model, but it also speaks to the realities that organizations might not have significant budget to purchase new hardware or have corporate relationships to get in-kind support and so forth. It really responds to the realities for under-served classrooms, and that's important for us. And maybe a poor segue, Alan, but I'd love to see more about how you've been starting to apply your content in Kolibri and how you're thinking about that structuring that we were just talking about.

ALAN:

Okay. I will show you I'll be humble because.

LAUREN:

A little sneak peek.

ALAN:

I'm still on a learning curve here, but I will again let you know that this is my server here, my old Mac laptop. I'm going to share just a few little. So I'm accessing it from the machine that I'm connected to here. Obviously, the *Math for Trades*, I love Chad's and Mark's, series of books, and they're very comprehensive in terms of the math that they're teaching. Here's the Pressbooks version, which is very well known. In the very first chapter, they have a great intro video where they give an introduction to the book. Very helpful, but it's a video. But again, because BCcampus thinks about it, at least they have the transcript here, and that's one first level addressing this issue because when you print this out, what you get is a placeholder here, but at least you can follow with the transcript of the video. In some cases, it feels like we can't do it as perfectly as the online version, but we want to make it enough so you're not missing what's happening. Sometimes I think about it as the way we address accessibility for images. It's at least the barest amount of description, so someone using a screen reader can understand

what they're not seeing on the screen. Also, as Harper mentioned, *Math for Trades* uses H5P at the end of their sections. They have a little practice quiz that's done. This is the question set type where there's a series of different types of multiple choice and fill-in-the-blanks questions. Again, but you'll notice the way, you know, BCcampus thinks about it is that they've already been addressing this in a way that if someone does have this in the print version, they give you a reference to Appendix C where you can at least get the quiz questions and there's an answer key. And in the print version, that's what you get in the appendix. This is the PDF. There's the questions. You can be sitting there, you're doing your work on paper, scribbling in the answers in your box, and then you check your key. I mean, this is how I learned algebra in high school. You did these practice exercises, and there were answers in the back and it's old school, but it does learn. So, running from Kolibri, we have here the version of more or less I've taken the PDF and I've chopped it into bits. So we've got the more or less chapters on the major topics, and where appropriate, we've added the introduction. Again, this is what you would see in the print version, as I was talking about. You see, an interactive element has been included from this version. Well, actually, you don't even know what's been excluded, but you can figure it out that there's a video. So that's what you have now. In Kolibri, sorry, I'd be going through my introduction. Okay. And I'd see this. But, you know, when I get to the end and I'm going to go to my next section, as we do in Kolibri, I'm going to go to the next section. And in this case, we've taken the video because it is, and you can see it's taken a little bit of time to load. It's probably, I can't remember like May. [Video starts] Welcome everyone to *Math for Trades*. Isn't math kind like learning a new language? [Video ends]

ALAN:

Yeah. Math is like learning a language. So here you can get the video, and you know this is one of the things that we're dealing with is like there is a fair amount of video content. And so a good amount of this has been produced by BCcampus, and it's available from the media server and we can definitely use that. I'm still trying to figure out, okay you have a YouTube video. theoretically, yeah, I know how to download YouTube videos, but I don't think it's within appropriate respect to copyright that I necessarily distribute a copy of that video. And so I'm trying to figure out what do we do in the placeholders for the YouTube content? Because as of now, we're going to get a blank box, and that's just one of the things that we're trying to work with. And again, for the H5P, you know, again, this will be the chapter. This is the last section of dividing whole numbers. As you can see, it explains things beautifully, gives a chance for the learners to read through this and see how. Oh I miss doing long division. I really enjoyed long division as a kid. You get some practice exercises. Again, you don't have the H5P version here, but you could, I just read about how to divide this and I could do my practise, and then I get to the end of chapter. But because we are able to do this, it says here, this is what I would get in the PDF, but then I can go on. And right from here, again, this is going to load the H5P spin spin spin. Okay. It's my slow network, probably. But we have the fully functioning version of the H5P activity here, and I can go and I'm doing terrible here because I'm just guessing at the answers. But as Jacob had mentioned in an environment where students are doing this on Kolibri, their progress through this would be reported back to the local server. So that's actually quite an advanced feature to have considering that we're not on the internet. So just for another title

that I've been working through the *Getting Ready for Work-Integrated Learning* by Deb Nielsen and colleagues has a fair amount of H5P. And so on one example in this chapter on rights and responsibilities, there's one of these nice case examples where Nico is at a paint store, and there are certain situations that are using the pop ups to explain what some of the situations in the work scenario are. And so what we can do, again, in Kolibri, we've got each of these chapters as different sections to read through. But they have some of the activities that are H5P that are going to be available here that you can come through. And again, I'm going to come through and read my chapter on workplace safety and I'm just going to go through, look how fast I'm reading. This chapter is a little bit long, but that was the segment point. And so one of the things that I noticed in this chapter is that in the Pressbooks, it sends students out to an externally hosted PDF on this Work safe safety checklist. And so we downloaded that and that's now part of the Kolibri experience, at least you can have access to that resource. Again, here, again, it's another H5P that we're able to run locally. Right now, our approach is to organize chapters in the sequence and then have the other content available. Again, it's not necessarily the most ideal. Sometimes you put things in Pressbooks with a very specific sequence to have it in the context. But I'd like to think this is at least better than having just the gray box. Thanks a lot, Emily for coming. Definitely hope to hear from me later.

And we've been going very fast here, and, you know, this is a little bit of a gauging like are people going to be interested? Do they understand what we're really approaching here? And really what we want to at least get out there and make aware is that this is a project we're working on. If people are interested, we'll share a slide and a link that if you really are curious enough, you can do more or less what Harper and I have been doing. So we're running Kolibri on a second machine or you can actually run it on your main machine and you can practise downloading from the same content that we are using. So really good to hear Salina say, there's a lot more. And I thought that's the thing. At first approach is like, you just put the content on a box, and this does way more, and that's why we're very excited about this. We've been going full steam here for a while and I'd like to hear from anybody either through chat or your mic. Mostly, we're really interested in finding out, do you know through your work of situations or scenarios that might have an interest in this kind of affordance or just through your own experience of who we might want to talk to in B.C. because we'd really like to identify some partners or communities to work with where we can actually create a real instance of something with a compiled set of resources from the BCcampus collection, but maybe including some of the other fantastic resources that are available from the Kolibri library. And so we're hoping that people can help us dream or imagine what those might look like. So I'd really like to hear if people have any questions or comments or suggestions as to what we should do next. And of course, for a lot of people, you know, I can't say I know of anybody offhand that says that needs an offline internet solution. But again, we're definitely going to be working with contexts outside. "How do you load content from a drive?" That's a good question. So how does that work, Jacob, when you put it on a portable device?

JACOB:

Yeah. So it can be a thumb drive or a hard drive, anything like once it's connected to your server computer, whatever computer you're using to run the Kolibri learning platform. In Kolibri, when you go to import content, one of the options will be to look for drives. And basically, Kolibri looks for all of the different drives available and looks to see if there's Kolibri-shaped content on it, and if there is, allows you to import it onto your server, your device from that hard drive.

LAUREN:

Yeah. And even if you don't have a drive, let's say there's two Kolibris that are near one another. They can search the content on the other Kolibri. So you can trade content, which is really helpful particularly as we think towards this model that we described earlier where people might be importing their own content. So locally. So, it's flexible in that way, but you don't have to be connected to the internet to get content initially, which is important to note. As Alan was saying earlier, there are organizations that preload devices with Kolibri. You could physically bring it on a drive or you can connect to the internet. And maybe. Sorry, go ahead, Alan. Hey, Clint.

ALAN:

If you could maybe talk about what are some of the devices that are the best work that you see in use? You know, my first is probably Raspberry Pi, but what else do you see as really a versatile platform to be running as your local Kolibri provider?

LAUREN:

So it really depends, and it somewhat depends upon how many users there are that are going to be accessing Kolibri at the same amount of time. So if you have a large classroom with 50 devices, having a Raspberry Pi might not be sufficient for all devices to be streaming video. We know that. So the server needs to be as robust as the number of client devices, but it really varies. And I'm going to draw a link in the chat to our hardware guide, which gives some guidance on specifications around different hardware that you might want for different models. But Jacob, you are, I think, jumping in with another response as well.

JACOB:

No. That's what I was more or less going to say, but probably worse than you said it.

LAUREN:

I think another thing to mention is that we support all different types of operating systems. So it can run on Raspberry Pi, but we have an Android app for standalone use. We have a Windows installer. We have different installers. We'll also drop the link for the download page. But because it's an application that can be installed, we also can run online instances of Kolibri. So if you think about settings, perhaps where it's a rural environment, where there's a community centre or an after-school centre and there isn't access to the internet, but maybe people have connectivity when they go home. We've supported instances where there's an online server with Kolibri that does a daily sync with periodic connectivity to that offline location. So a learner

could come into that community centre, engage with materials, and then when they go home, still be able to access the online server with their same account. And Jacob described earlier that model where you could bring a tablet to school. And it will seamlessly sync all your data to the central server so a teacher can be able to see what content you've engaged with and then provide you with more lessons and quizzes to go home with. So it's really flexible and the hardware is dependent. The intention is that it can run on all these different hardware models because hardware exists, and we also are thinking about things like e-waste and not necessarily introducing new hardware if it's unnecessary. It's important to us that it runs on these different devices so that we can maximize the potential of what already exists. Think really smartly about what to supplement with. Then also, particularly for governments that have made significant investments in technology but haven't necessarily thought about how it can be used. Kolibri as a free and open source solution is something that can run on all these different types of devices.

ALAN:

All right. We'll call the young man who just finished his video on.

CLINT: Is that me? Yeah.

ALAN:

Oh, I thought maybe you wanted to ask a question.

CLINT:

Well, no, I did. Actually, I don't know if it's a question. It's just more as we were thinking about use cases and stuff, you know, one thing that in British Columbia, we have experienced our share of natural disasters. And we often have communities that are cut off in areas, because of wildfires, because of floods, because of these kinds of climate change disasters that have been occurring that are probably only going to increase in the future. And one of the use cases I've been thinking about a little bit more is around continuity of services for students, for example, who might be cut off because of a natural disaster, which is very likely a scenario that we're going to have to face in the very near future. We have institutions in the Lower Mainland in Abbotsford during flooding a couple of years ago that were completely cut off and had to switch to remotes and other forms of learning for their students. So I'm just trying to think through a use case here of how, it seems to me that there could be a platform that Kolibri could be potentially in use for providing those kinds of continuity of services when there's going to be a prolonged cut-off due to environmental disasters.

LAUREN:

Yeah, I think that's a really interesting modality to even just as a backup, so there can be supplemental resources. In the US, something that we talk often about is most schools and the K–12 space in the US are connected to the internet, which is great, but there's still millions of learners that don't have access to the internet at home. And then oftentimes what happens is teachers need to identify paper-based solutions or just offline Google Docs that doesn't really

meet the same teaching learning needs that their internet enabled peers have with Google Classroom or other digital online tools. Being able to provide something like the beginning of the school year on a low-cost Raspberry Pi where everyone can have access to the textbooks like you were describing earlier and exercises with the ability to self-assess. That's a really useful solution. We talked about this model earlier for self-paced learning. One thing that when we are talking to organizations about designing a program with Kolibri is we think about the role of an educator. We have this really robust functionality for educator support, but it's not required. It can be used for self-paced learning. We've really designed it for that way. So there are modalities where to your point, Clint, it could be something where it still exists on the side. Then from a programmatic perspective, you could look to see whether just the existence of content in a platform that is easy to access leads to any usage, which is something to consider.

ALAN:

That's an interesting idea, Clint, to think about community emergency preparedness. and, you know, thinking like, you know, are we looking for likely places that this would be effective like local libraries, obviously, schools, you know, and other organizations that have that ability of a place where people might come to get their learning experience. But that's why we're trying to get this out early again is to start getting in touch with people who are in touch with the people who might be able to suggest with us ideas, and we're looking forward as we develop this. Again, we're thinking, making BCcampus content available, but you can get quite a bit more and be able to do, as we saw Jacob demonstrate, to be able to almost dynamically put together sequences and lessons from a lot of interactive material that's already available in Kolibri and by default, we need even to touch it, it is all openly licensed because that's what makes it available. Is that correct?

HARPER:

In regards to our content, yes. Yeah.

LAUREN:

Yeah. And similarly, for us, our library is, primarily OER, but then some organizations provide us with special permission to utilize the content specifically on Kolibri. And I think part of that is because in the content creation space, people say, Yeah, of course, my content is free, but they are learning about the concept of open. And so this is a way where they can still be equitable in their approach through a network likely be able to get some data back that's useful for them, but not necessarily have the open license that allows for the type of remixing and potential derivatives that we're all familiar with. And I like what Gwen is suggesting that it's easy for us to go to the like, Oh, these places that don't have internet, but there could be also situations where it's just more appropriate for the learning scenario to have this, you know, structured or not completely structured, but sort of like a guided series of activities. Some people are thinking about, you know, not having the distractions of the entire internet when you want to give people a learning experience, and you could see Kolibri working that way as well. Well, we'll definitely give time here. You know, I know this is probably new and, you know, it's a

different way of thinking about open content. If anybody is keenly interested, maybe, Paula, put it up that slide with the blue one with the instructions. If anybody is keen to do this, and we'll get the link in the chat as well. But if you go to the Kolibri library, you're not going to find BCcampus' content because we're still working on it. Once we get it finalized and if Kolibri is interested, they'll make it available where you can just go in and grab it. But now, it requires a process and Jacob did touch on this where you use what's known as a token. It's an identifier. But everything that Harper and I are working on could be available to someone who wants to just set this up and, you know, I just installed it on an old Mac and you can run it from there and experiment as well with the way you create user accounts and coaching tutoring accounts. But you can actually get a sense as to what it's like to be able to access the content. And, you know, you'll find, yeah. You know, sometimes you have to wait for something to load. But again, remember, if you're in a situation where you have no internet, you're getting quite a bit more than just, you know, necessarily content in print.

So this is a link to a document that just has some of the basic steps about we link to the resource that Jacob and Lauren provided, which is kind of like the five steps to set up a Kolibri. It's downloading an app. And then importing content. And so you can go in and, you know, you can grab the things that are available from the public library or you can use the access token. It's in this document to get the things that we're working on as well. And so, you know, again, you know, we're a little bit in an early phase on this, and we're starting to pick up steam and just so glad that we had this chance to do a webinar got to spend a good amount of time with Jacob and Lauren on talking about this, and they've been very supportive about helping us figure out and identify the best ways to make this content available. And, on the other hand, you know, when we get the AD titles prepared, ideally, this is a way to make the BCcampus Open Collection available to even more people in parts of the world because if it goes into the public library, where someone else can say, Oh, my gosh, this *Math for Trades* is the thing that we need for our local community. And there's a lot of that. You will find, again, you've heard that there's a sense that there's a lot on primary and secondary education. There's reading materials in so many languages that'll make your head spin. But there's a need as well for basic education and vocational skills as well that I'm sure would be valuable in the rest of the world. So maybe we'll just go to that last slide.

And we have a link here. I definitely urge you to. The community is an open community where you can meet other people using Kolibri. Sometimes they get a little technical, but I know I've used it and when I ask a question, even a general question, I've gotten some fantastic support. So I know we've been doing a lot of talking and showing, and I hope that if you're interested or know people we should talk to that you will contact us after the webinar and just want to give a big round of thanks to Lauren and Jacob for their time and what they've done to get us going here. And thank you to my colleague Harper for making things work behind the scene, and the invisible Paula who makes all the webinars come together like magic. And thank you everybody for being part of this webinar that we're doing, and we hope the next one is a big update of what we've done next.

HARPER:

Yeah. So yeah, so we're I guess, finished our kind of talking at you portion or, you know, for the most part. And yeah, if you have any questions, feel free to, both Alan and my emails are down on this slide. Mine is just hfriedman@bccampus.ca and Alan says kolibri@bccampus.ca if you have any questions after the fact, you're welcome to send them to us. And um, Yeah. I'd also be interested in answering some questions that we got from registration because during registration, people had the opportunity to ask some questions.

ALAN: Let's do that.

HARPER:

Yeah. So the first one that I got was someone asked, "Can I add my OER text that is published at eCampusOntario Open Library?" And I kind of wanted to generalize this question and ask Jacob and Lauren. So if someone wants to add their resource to Kolibri, how can they go about doing that? And I guess that can also segue a little bit into the talk about content creation.

JACOB:

Yeah, I think during the demo, when I pasted in content into a channel, I should have also demoed that you can import your own content. You can import PDF, videos, audio files, HTML zip files for H5P, for example, and that goes into Studio, and then you can organize that in Studio. That is one way to make the channel. And then if you wanted to make that publicly available on your library, our content team has a way of contacting them in order to go about doing that, I believe. So make that, then you can use a token to put it in.

HARPER:

Yeah. And just to clarify the content that so say this person they have an OER that they have published to eCampus Ontario and they want to make it available on Kolibri. If they wanted to make it kind of public, they'd have to kind of go through your content creation team to look at getting into the library, but otherwise it's kind of on their separate kind of private.

JACOB:

It's like whoever has the token can use it basically. That's if I made a channel and I take my token just the way that Alan did with the BCcampus materials, like anybody with that token can look at it. So it's in the hands of the content creator to decide who it gets distributed to. But our team does decide what goes into the public library or curates it, I guess, I should say.

LAUREN:

I put a link in the chat to a part of our community forum where folks can share their tokens with one another. So that's another way that you could share more about your work and further extend your OERs.

ALAN:

It's a little bit like an unlisted YouTube video. You know, if you have the link, you can get to it. I mean, what I did when I first started on this project, you can create an account in Studio and you could start building content, I think, you know, you get 10 megabytes or something like that, which is plenty to get a sense about what you can do. But again, you know, the other thing that has come up. Okay. So you've got a single OER or in Pressbooks, like, you know, it's got, you know, the information, it's got the license on every page. Okay. Now that we're slicing and dicing this thing into separate little pieces. The thing that I've been doing is using Adobe Acrobat to make sure we have a footer on every page that has the attribution, because potentially you know someone could just access a single part of it. So that was one of the extra steps that I put in there.

LAUREN:

One thing to note, Alan, is and I think this is important, particularly for this community is that you can't you can't add content to Kolibri by Kolibri Studio without putting in the license and attribution, and we do that because we want to make sure that that travels with the content so that our users and content creators, everyone is on the same page about how you can utilize the content, that's really critical to us as a strong advocate within the OER community. One additional thing if you don't mind me adding in here, I think even if your takeaway from the session isn't ideas for where Kolibri can be used. I think it's some good food for thought around content creation in general and thinking about the ways in which you create content, particularly OERs, and not making them exclusively or heavily reliant on the internet. So for example, in creating an OER, trying to not have as many links out to web pages that would make your content not easily offlineable or thinking about guidance materials that can go along with the creation of your OER, so you're not reliant on other internet. So you don't need the internet to support its use. This is really important as we're creating content because you're otherwise limiting the potential for your OERs for all the five Rs. I think that's really important for this group of curriculum designers, librarians, and others who have joined today to be thinking about as we're developing new materials.

HARPER:

That's a great point, Lauren, I think, especially, you know, and the concept of universal design for learning, that's a really important point especially kind of, you know, after COVID, and everything went online, kind of that's the direction things have been going where people are really leaning into the kind of online aspect, but, you know, forgetting that portion of people that just don't have access. And so trying to remember that we need to serve, you know, both kind of aspects of access and just remembering and thinking about all of those different communities that need to be served. If there's nothing else to add onto that one. The second question that we got was, "How can students support other students if they know their peers may be lacking internet access?"

ALAN: That's an excellent question.

LAUREN:

That can be interpreted in so many different ways, and it's really contextually specific. I'm less familiar with Canadian policies to support broadband for all. I'm more familiar with the US policies, but, I think what's important about Kolibri is thinking is recognizing that it's an alternate solution as we're waiting for broadband for all and that we can still create a quality digital tech-enabled learning experience. Being able to use your own internet to be able to download Kolibri relevant content and then give it on a USB or a thumb drive or an old laptop to someone who doesn't have access to the internet is perhaps one way that you could support.

HARPER:

Yeah, that's great. And yeah, I remember earlier you were talking about how if there are two Kolibris next to each other, they can they can kind of share content back and forth, and I think that kind of when you said that, knowing this question had been asked, I thought maybe that could also be kind of an aspect of a solution in regards to this question.

JACOB :

Yeah, for sure. Actually, I wish I would have thought to demo that in particular because it's just when you're in the library in the learning platform, you just see devices that are there and then you can just hop in and explore all the content on their device remotely and then pick and choose things to download onto your own. That's a pretty awesome experience.

ALAN:

It's almost like a mesh network capability here that one Kolibri can talk to another.

LAUREN:

Yeah. Exactly.

HARPER:

All right. That was all the questions that we got during registration. I think we answered all the questions that we had in chat. Again, we've got five more minutes if people have any last minute burning questions. And otherwise, you can just send us an email because that's also really convenient, and we have access to the internet.

ALAN:

Yeah. Well, I just want to again, thank everybody for showing up and hope you think about this and let us know if you have any questions or comments. Thanks again, BCcampus for supporting this webinar.

JACOB: Thank you all.

HARPER: Yeah. And thank you, Jacob and Lauren for coming on here too. Much appreciated.