

**Transcript for OER Production Series: Applying Universal Design for Learning (UDL) to OER
BCcampus webinar held on August 16, 2022**

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JOSIE GRAY:

OK. Let's get started. So, thanks, everyone for taking some time out of your day to listen to me talk about how we can apply universal design for learning or UDL to open educational resources or OER. First, I would like to point out our event code of conduct, which you would have agreed to when registering for the webinar. If you'd like to review the code of conduct, my colleague will put a link to that in the chat. Next, I would like to highlight that I've posted a link to the folder where you can download all of the resources related to the session on the slide. The link is bit.ly/beyondaccessibility. If you go to this link, you will find the PowerPoint file for these slides which are accessible to anyone who is using the screen reader. And they include my full speaking notes as well. You will also find a PDF of the slides and then a list of the links to resources that I will highlight throughout the session. So, my hope is that this will allow you to easily refer back to these slides, to adapt them for your own purposes, and engage with the content in a way and at a time that works best for you.

While I speak, I will be reading out the content on my slides as well as describing any visuals that are there for anyone who cannot see the screen. In addition, we have a caption are with us today so you can turn on the captions in the zoom window if you'd like to see the captions as we go. And, and after the session, the recording will be properly captioned and then emailed out to everyone who has registered. So, these are some examples of ways that I am trying to incorporate accessibility and universal design for learning into my presentational practices. And we'll be digging into more of all of these ideas in this session. Before we get into the main topic of exploration today, I would like to take some time to introduce myself in relation to the lands I live on, as well as the topic of accessibility and universal design for learning in OER. My name is Josie Grey and I use she, her pronouns. For those who can't see me, I am a thin white woman in my mid-twenties with shoulder length blonde hair, glasses and a septum piercing.

I am joining you today from the traditional and unceded territories of the Lekwungen speaking Peoples, now known as the Esquimalt and Songhees Nations and the territories of the W̱SÁNEĆ Peoples. I have lived uninvited on these territories for nine years and I initially moved here to complete my undergraduate degree in history at the university of Victoria, and this is where I started my work in open education with B.C campus. And it's also where I completed my master's degree while studying from home during the pandemic. I grew up on unceded Tsimshian Territory on the northwest coast, around the ocean, mountains and rain forests. I also have ties to Treaty 6 Territory where most of my extended family lives. Growing up, I spent a lot of summers on my maternal grandparents farm, which is on the traditional territories of the Blackfoot, Tsuut'ina, the Sioux, Métis, and Cree Peoples. I am extremely grateful for the privilege I've had to live and learn in each of these places. And as a settler, I have a

responsibility to learn about Canada's colonial and genocidal history and the enduring inequities and injustices in this country.

And support the work of Indigenous peoples across this country who continue to fight for truth, justice, equity, safety and rights to their own lands. I work for B.C campus, which is an organization in British Columbia, Canada, that supports all of the public post-secondary institutions in the province, in the areas of open education, learning and teaching and other special projects. Specifically, I work on the open education team as the manager of production and publishing. In this role, I oversee the production and publication of OER projects that B.C campus funds and support faculty in creating OER that are well-designed and accessible. I also manage the B.C open collection, which is a collection of over 300 open textbooks and open courses. And you can view the collection at collection.bccampus.ca. I have been working in the area of digital accessibility and open textbook publishing for six years. And in that time, my understanding of accessibility has evolved for a very, from a very specific focus on web accessibility guidelines and accessibility checklists to a more complicated understanding informed by universal design for learning and the social model of disability, all of which we'll explore in this webinar.

And in 2021, I graduated with a master's of design and inclusive design from OCAD University, and that degree has also informed how I approach and understand this topic as well. The things I'll be sharing today come from my experience in making open educational resources more accessible to disabled students. And all that I have learned along the way. And my hope is that I will be able to share some concrete things that you can do to make your resources accessible and flexible for all students, as well as concepts that may help you think more critically about accessibility and disability. However, it's important to recognize that I am not a disabled person and that also that disability is a huge category. And there are a huge, there's a huge amount of diversity even among people with similar disabilities. So, I say this because I do not know everything of what it is to make something accessible to all people. And what may work for one person may not work for another person. So, I really want to encourage you to dig into all of the things we're going to be talking about today and then seek out and listen to the voices of disabled people and disabled students in particular, especially the ones in your own campuses and in your classes.

Their lived experiences is really valuable. And I know I've learned a lot from people sharing from their lived experience. So, this will be a rough structure of our session today. I will start with a short review of the session, my colleague Harper Friedman did on technical accessibility last week. Then I will introduce two concepts that will help us think beyond technical accessibility and conformance. So, this includes the social model of disability and universal design for learning or UDL. And then we will move into how all of this can apply to open educational resources by thinking about things like multi modality in multiple formats, accessible math and image descriptions. So, let's start by reviewing the previous webinar on technical accessibility. If you were not able to attend or would like a refresher, my colleague will drop a link to where

you can find all of the recordings of our past or our production series webinars. In this webinar, Harper covered a few common assistive technologies that may be used by students to access their course materials like screen readers, text to speech and zoom text.

Harper also introduced web content accessibility guidelines, which are the minimum technical requirements that will allow students with disabilities to access all of the information in a digital resource. Web content accessibility guidelines, often abbreviated to WCAG or WCAG, is an international digital accessibility standard that is developed and maintained by the W3C web Accessibility Initiative. WCAG is made up of four principles that digital content to be perceivable, operable, understandable and robust. And finally, Harper went into more detail about accessibility guidelines that are most relevant when creating educational materials like headings, tables, use of color and links. At the end of the previous session, Harper discussed the strengths and weaknesses of accessibility checklists. And this is where I'd like to kind of pick up our conversation today. The previous webinar focused on accessibility considerations that can be checked off. Do your images have alt text? Check. Does the link text.

Describe the destination of the link? Check. Do your videos have captions? Check. These checklist items are a great place to start because they are concrete and usually, easily actionable. In addition, these items make up very important minimum technical considerations to make sure students with disabilities can access their educational materials. However, a checklist approach to accessibility has a number of weaknesses. It makes accessibility seem like something that can be fixed later. It does not ensure good design. It does not account for the multiple formats of OER and students face challenges that are not addressed in standard accessibility checklists. And it does not ensure equal access to learning outcomes. When talking about accessibility, it's helpful to talk a little bit about how we think about disability. So, the medical model of disability understands disability as an individual problem, affliction or deficit that needs a cure or accommodation. It sees disability as grounded in the individual.

And this is the model that is used in medical settings, and it's also used at universities and colleges where students need to have a diagnosed disability to be eligible for accommodations. In contrast, the social model of disability sees disability emerging when there is a mismatch between a person and their environment. So, with this view, disability becomes more of a spectrum that can affect different people in different ways, depending on their context, their environment, and the tools they have access to. And it's a product of history and culture. So, for example, someone who has no vision and uses a screen reader to access digital content will not be able to interpret an infographic without asking for help. The medical model of disability puts the onus on them to ask for an accommodation. While the social model of disability puts the onus on the person who created or shared that infographic to provide that information in an alternative format. So, the social model of disability points out that many barriers that currently exist, do not need to be barriers, for example, like having an only steps access to a restaurant rather than a ramp.

Students may face all sorts of barriers, even if they don't have a diagnosed disability and there's not really such thing as an average student. In an article by Jan Wilson, she argues that the classroom, quote, far from neutral, is constructed for a mythical, able bodied neurotypical norm that neither reflects nor accommodates the wide range of diverse learners within it. Regardless of whether these learners have been diagnosed with a disability. What she is getting at here is the problem that comes up when we design for what we think is normal or what we think is average. The reality is there is no such thing as a normal or average student. Students vary greatly in their interests, family situation, culture, background, experience, strengths and weaknesses. And all students benefit when educational materials are designed to be accessible and inclusive. All sorts of things affect the accessibility of a resource. And these things are very much context dependent and they can vary from student to student.

So, for example, a student's day to day life can affect access. Consider a student who spends an hour on a crowded bus every day commuting to school and spends long days on campus studying. For this student, a heavy print textbook would be really annoying and they might decide to leave it at home rather than lug it to school. So, that's a barrier to access. Another example is differences in digital literacy among students. Many OER are primarily online resources, and for those of us who work on our computer all day, it's really easy to take for granted our comfort and experience with working with digital content. Even young college students who grew up with smartphones and easy access to the Internet may not know how to search a PDF or understand how to take advantage of the different features and prospects, or know, or know that an epub file is something that they can access on their phone. So, if your students are returning to school later in life, paying attention to digital literacy and their comfort, using digital materials will be even more important.

A student can't learn well from a resource they don't know how to use or don't like using. Another example is access to technology. Not every student has access to their own computer, and if materials are only available online, those students will likely struggle with accessing them. Day to day life, digital literacy, access to technology. All of these things are very individual and context dependent, and these are things where OER in particular has the potential to really make a difference. Everyone has a preference in how they would like to access their learning materials and open educational resources that are available in multiple formats. Make it possible for students to pick the format that they are most comfortable with and will work best for them. So, for example, students who don't have a personal computer might like, like a version that they could read on their phone or a print version. Someone who spends long hours on transit would likely prefer, prefer a digital copy that they could download on their computer for easy offline access.

Someone who likes to annotate their textbooks would probably really appreciate a PDF. And so by providing students choice, there is a potential to reduce barriers that don't need to be there. Part of what I'm talking about here is universal design for learning or UDL. UDL encourages designing, teaching and learning environments and materials so that they provide choice and

flexibility for students. UDL has three principles, they are multiple means of engagement, representation and action and expression for students. Engagement is the why of learning. It looks at designing, learning experiences that provide options to motivate students to learn. Representation is the what of learning. It looks at how the content is being presented to students and aims to create content that give students options and how they engage with that content. And then action and expression looks at the how of learning. It looks at options students have for demonstrating and managing their knowledge and learning.

Now, since we are talking about open educational resources, I want us in this session to focus on the idea of providing multiple means of representation. Since it is the guideline that is most applicable to educational materials. For this principle, universal design for learning provides three guidelines. They are perception, language and symbols and comprehension. And we're going to go through each of these three guidelines in more detail. And after each guideline, I'm going to provide a few examples of how it can be applied to open educational resources. The first guideline is perception, which has to do with providing options for students to interact with content that doesn't rely on a single sense like sight hearing, movement or touch. Many of these things are closely related to web content accessibility guidelines that we talked about last time. However, a key aspect of the perception guideline is user choice and the ability to customize. So, this includes offering ways of customizing the display of information like changing the size and spacing of things like images and text, changing colors and increasing color contrast, adjusting the speed of audio in recordings or text to speech tools and changing fonts.

The next is to provide alternatives for auditory information, so this can include providing transcripts and captions for video and audio. But it can also include American sign language, visual representations like sheet music or emojis or visual or tactile experiences for sound effects like vibrations. And finally, offer alternatives for visual information. So, this can include text descriptions for images, audio versions of text, tactile graphics and 3D representations. One example of what this could look like is making a resource available in multiple formats. So, for example, if you are creating your own readings or assignment descriptions, you might share the PDF and the word file. The PDF is easier to download and open, but word has built in accessibility tools like text to speech and the ability to customize the display of text. If you are creating OER and press books, which is a self-publishing tool often used for creating open textbooks, you can easily produce air in multiple formats, including a webbook, PDF and e-book.

Each of these formats have different strengths and weaknesses and are useful in different situations. So, PDFs are good for printing and annotating. The e-book is great for offline reading on a mobile device and customizing the display of text. And the webbook can be accessed in any browser at any time and can include multimedia content and will work with browser text to speech tools. Another way to support perception is to provide content in multiple modalities by combining text images, video, audio and interactivity to give students multiple ways to engage

with content. So, for example, text to speech, audiobooks, videos and H5P activities, which I'll talk more about later on. So, this example shows a text to speech tool that is available by default in Firefox called Reader View. It allows you to customize the display of text on a web page as well as read out that text, read that text out loud. So, in this example, I have enabled reader view in an open text book published in press books.

So, we are looking at a chapter in the web book. So, I'll just play a short demonstration. (AUDIO PLAYS)

SPEAKER:

Linear measurement can be defined as a measure of length. The length of a table, the length of a piece of paper, the length of a football field are all examples of linear measurement. We might all.

JOSIE:

Can someone let me know if you can actually hear that? I can't remember. (CROSSTALK). Enabled the audio. Awesome. Thank you so much. So, that's just an example of a browser, text-to-speech tool. Other browsers have similar tools. For example, Chrome has many text-to-speech browser extensions that do similar things. In addition, programs like Adobe Reader and Microsoft Word also have built in text-to-speech capabilities. So, I would recommend experimenting with these tools for yourself and sharing them with your students who may not know that they exist. Here is an example of an audio version of a "Math for Trades" open textbook. So, the authors wrote the textbook and then narrated each chapter. And those recordings were compiled in a playlist in this video hosting platform culture where they can be listened to directly there. (AUDIO PLAYS)

SPEAKER:

Linear measurement can be defined as a measure of length. The length of a table, the length of a piece of pipe and the length of a football field are all examples of linear measurement.

JOSIE:

And then the recordings were also embedded directly in an open textbook, which was published with press books. So, students can easily find the recordings and then listen as they read. But my video went to the wrong spot, so just give me a second to skip forward. Length, the pipe and the length are all. So, this is the audio file embedded in the textbook. (AUDIO PLAYS)

SPEAKER:

Linear measurement can be defined as a measure of length. The length of a table, the length of a piece of pipe and the length of a football field are all examples of linear measurement.

JOSIE:

Here is an example of math content and press box that is written using latex markup language and then rendered with math jacks. So, one of the features of math jacks is it allows users to

customize the display of math content. One of the ways this works is you can right click on any of the math equations, go down to math settings and select scale all math, and then enter a percentage value for how you'd like all math to be scaled. So, in this case, I changed 100% to 200%, and all of the equations doubled in size. To change it back, I right click, go to math settings and go back to scale on math and change 200% back to 100%. You can also set the zoom so that only select equations zoom. So, again, right click, go to math settings and then zoom trigger. And here is where you select what you want to cause an equation to zoom. So, right now it's set to no zoom, but you can change it to hover click or double click. So, I'll select click. And now when I click an equation, it enlarges based on the zoom factor, which is also something that can be customized in math settings.

The second guideline is around the use of languages and symbols to establish a shared understanding of the topics being discussed. So, this includes clarifying vocabulary and symbols by providing definition lists or symbol legends with alternative text descriptions. Clarifying syntax and structure, supporting decoding of text, mathematical location and symbols such as through text to speech, which we'll talk more about in a minute. Promote understanding across languages, for example, by providing definitions of key terms and students first languages. Illustrate through multiple media, for example, represent a concept in two different ways, like a text explanation and a video demonstration. So, let's go through some examples of how this can be applied to OER. So, here is a screenshot of a chapter in an open textbook published in press books. The author of this book used the press books glossary tool to provide definitions for key terms directly in the text. Terms that are glossary terms appear bold, dark, red, and with a dotted underline.

When students select the term, the definition for the term pops up. So, in this screenshot, the terms, voltage, current and resistance are all marked as glossary terms and the definition of voltage is displayed. In addition, a full list of glossary terms and then and their definitions are provided at the back of the book. This is an example of a video tutorial that a VIU instructor made to demonstrate different hairstyling techniques. The videos don't have sound, but they show the instructor demoing different hair coloring and bleaching techniques on a mannequin. So, this is an example of something that would be very difficult to demonstrate with just images and text. And so by providing a video demo like this, students can watch exactly how the technique should be done as much as they want. And here is another example of how math jacks can make math equations more accessible. This video shows content in a math textbook that is written in latex and rendered with mass jacks. MathJax translates the equation into MathML, which can be read by my NVDA screen reader.

So, this video shows how the NVDA screen reader interprets the equations. (VIDEO PLAYS)

SPEAKER:

What you do here is take the number of cubic inches you have and divide it by the number of cubic inches there are in one cubic foot. The three lines, line one, foot cubed equals the fraction with numerator and cubed and denominator in cubed divided by ft cubed. Line two, feet cubed

equals the fraction with numerator, 2,652 and cubed and denominator 1,728 and divided by ft cubed. Line three, feet cubed equals 1.53. (VIDEO ENDS)

JOSIE:

The final guideline is around comprehension to support students in constructing meaning and generating new understandings. So, this includes providing background information and context and supporting students and bringing in their own knowledge. Also highlighting patterns, critical features, ideas and relationships. Guiding information processing and visualization and maximizing transfer and generalization. How information is organized and structured and educational resource plays an important role in comprehension. So, that means it's important to think about how you will scaffold new knowledge. Consider how people might navigate through the resource. Pay attention to the number of chapters, of the titles and the use of sections and subsection, subsections. Establishing numbering systems for headings, figures and tables and ensuring chapters have consistent chapter elements and structure. So, these considerations will really vary from book to book and the subjects that you're working with.

But the more intentional you are about thinking about the structure and the organization and the navigation, the more useful and powerful your resource will be on its own, which will increase access as well. Over the next few slides, I'll be showing a few different examples of different H5P activities that instructors have created to support students in comprehending different subjects. H5P is a tool that allows you to create web based interactive activities, informative assessments. H5P is enabled in tools like press books and will allow you to build these activities or reuse activities created by others in press books and embed them directly in the web book. For more information, you can visit the website at h5p.org, you can also check out the H5P press books kitchen at kitchen.opened.ca. So, this site was created and maintained by Allen Levine and was used to support people who had received grants from B.C campus to create H5P activities for existing open textbooks. The project is done now, but the site has many great resources and webinars that are there that you can go and explore.

So, here is one activity taken from a writing for success open textbook. It asks students to identify all of the sentence fragments in the following ten options. In this screenshot, I have selected all the ones I think are sentence fragments. Then I can check, click the check button and the activity will let me know which ones I got right and which ones I got wrong. So, this allows students to kind of self assess their understanding of sentence fragments. Here is another example from a vital science measurement open textbook. This shows an interactive video activity demonstrating handwashing. So, for this activity, students watch the video, and then the video pauses at different points to ask questions or provide more information. And the final activity I will show is an image hotspots activity, which allows you to directly label an image. And this example, which appears in a business writing textbook, a sample document is provided to illustrate how to write clearly. And different parts of the document are labeled like the title, headings, topic and transition sentences and bulleted lists.

So, when someone clicks the hotspots, more information about each of those items and how they should be used is provided. Another way to support comprehension is the intentional use of text boxes, which can be a great way to draw attention to key information that supports the main body of a text. So, for example, you can highlight the most important ideas of a section, walk through key processes or procedures and provide concrete examples or case studies to support main ideas. In this screenshot on the slide, there is a purple text box that contains an example of translating a ratio into higher terms. If you want to dig into universal design for learning in more detail, I would recommend starting at the website located at udlguidelines.cast.org. There you will be able to explore all of the principles, read about the guidelines and checkpoints and where they'll provide more details about each principal. And it also includes a lot of concrete examples. So, so far we've talked a lot about the digital.

We've looked at tools that allow you to have content read aloud, ways of customizing the display of text as well as video, audio and interactivity. But what about students who prefer or require a print version? So, what are some reasons why someone might want a print copy rather than a digital copy of an educational resource? So, for this question, I invite you to use the annotate tool in zoom. It can be accessed by going to view options at the top of your screen and selecting annotate. And then you can hand, you can type or handwrite your answer. You are also welcome to post your ideas in the chat as well. So, I'll give you a minute to share some of your ideas. Why might someone want to print copy? Comment in the chat connectivity? Absolutely. Print, you do not need a good internet connection to read a print resource. So, I'll read out some of the ones that come up on the slide, preference, personal preference. Some people do prefer print. Another one can take it anywhere. Absolutely.

Another one, low digital literacy may be more comfortable with a print copy than a digital copy. Not good access to Internet, time. Again, some people just have a preference for print. Absolutely. Another one because they require braille, for sure. Tired of looking at screen. Better comprehension via print reading. Screens give them migraines. Absolutely. Learning style. Some people feel that they learn better on print versus digital. Frequent power outages. Yes, absolutely. Easier to take notes. Screen time too long. Yes. Wanting a break from the screen. Absolutely. Thank you. Yeah. These are all perfect suggestions about why someone might prefer a print copy. OK. So, we're going to go on to the next thing. So, I'm just going to go to the next slide and then I'm going to clear our annotations. Just give me a second. There we go. So, when creating resources that follow accessibility guidelines and incorporate UDL principles, it can be a challenge to ensure that students who want a print copy can also access that same content.

So, for example, text size in a print version cannot be adjusted. So, you want to ensure anything that will be printed is at least 12 point font and even consider providing larger print options. In addition, you will need to consider how students using a print version will access things like links while ensuring that the digital version does use descriptive link text. So, one way to do this might be to provide the full URL in a footnote or at the end of the resource. So, students using

those print copies can go look up those URLs. Another consideration is how to ensure students can access the multimedia and interactive content. So, one way that press books supports this, which is shown in the screenshot on the slide, is by providing direct links to all H5P activities and as well as all audio and video that is embedded in the resource. So, the PDF version will have links that points to those activities. So, they could read the text in the print version and then go to those links to find those media activities.

Another thing to consider would be to provide printable alternatives of those activities. So, for example, a multiple choice question, H5P activity could be written in regular text that could be printed, or you could provide a transcript for an audio recording that could be printed so students could still get those that content. So, to end our session today, I wanted to spend some time practicing, describing images. So, image descriptions are text equivalents for an image that is provided for anyone who can't see the image. And they are important in all sorts of contexts. So, whether you are describing images used in PowerPoint slides, textbooks or Twitter posts and describing images can be kind of complicated. So, I thought we would spend some time practicing and thinking through what makes a good image description. So, in the last webinar, Harper provided some tips for writing image descriptions, which I'm going to review for us all. So, in terms of what to describe with an image, you want to focus on the content and the purpose of the image.

What is the image trying to convey? What information would be lost if this image was removed? And the answer to these questions will really depend on the audience and the context. In terms of how to describe, try to be as objective as you can, avoid putting your own feelings about an image into the description. Be concise. And if the image is really complex, start by providing kind of a general overview of the image before getting more specific. So, to give you an example of how context can change a description on the slide, I have a famous painting *Starry Night* by Vincent Van Gogh, and there are three different ways that you might approach describing this painting depending on the context. So, if you're just kind of mentioning a bunch of different paintings and the subject of the painting isn't really that important, you could just provide the name and the artist of the painting as the image description. Because in this case it's a well-known painting, so that may be enough if the content of the painting isn't important to the context that it's appearing in.

You could also provide a description of what is shown in the painting. Or you could go into a description of the brushstrokes and really the artistic style that is being used here. So, what you focus on will really depend about why you've included this image and what you want students to take away from it. There are a few different places that you can describe an image. So, there's the ALT text. So ALT text is a short text alternative for an image that those who are using screen readers can access. The ALT text will also be displayed if images aren't loading due to a weak internet connection. Depending on the tool that you're using to create your OER, you will be able to add ALT text when you upload the image or when you edit the image. There's usually a text box that's labeled alternative text. You can also use the surrounding text or caption to

describe an image. So, this makes the description available to everyone. And if you have a complex image, you can create a long description of the image and then link to it from somewhere else in the text.

So, I want to spend a little bit of time talking about writing descriptions for complex images such as charts, graphs, diagrams and maps, which will likely require longer descriptions than can fit in alt text. So, in these cases, you'll need to create a long description for the image that students who can't see the image can access. So, for some images, you might be able to describe them in a few sentences or a paragraph. But over the next few slides, I wanted to highlight two different strategies for describing complex images that might be more effective and manageable. So, these guidelines are based on work shared by Supada Amornchat in a resource called complex images for all learners. It's a really incredible resource and my colleague has shared a link to that resource in the chat. OK. Looks like the link is broken. I will look up the correct links or maybe one of my colleagues can and will share a better link for that file. So, the first thing is using lists to structure your image descriptions.

So, you can use bulleted and numbered lists to represent information that is presented in pie charts, bar charts, line graphs and flow charts. And this can make the information easier to digest and navigate rather than a long paragraph. You can also use data tables to represent information found in complex tables, pie charts, bar charts and line graphs. This can also support someone in navigating through complex information and data because a table provides more structure than just multiple sentences. So, now let's think through some examples. I have an image on the screen of a map of Canada that shows the 11 numbered treaties that were signed between Indigenous peoples and the Crown. Now the text on the image is quite small, so we'll put a link to the original image in the chat so you can look at it on your own screen. Thank you, Harper. Harper shared an updated link for the complex images resource. So, take a look at this image and I want you to kind of think through how you would approach describing this image.

What is the different types of information that the map is conveying? What information would you include and how might that change depending on the context? How would you structure the information? You won't have time to actually write out a description. So, the main thing is just to think about how you would translate this image into text. So, I will give you, I'll give you a minute to kind of think it through. If you like, you're welcome to share ideas in the chat, but not at all required to. And then once the minute is up, I will talk through some of the considerations that I came up with. OK. Thank you, everyone, for sharing some of your ideas in the chat. These are definitely, definitely possible ways to approach it. So, we have using a chronological list and then with approximate zones linked to current provinces. Someone suggested trying to do it in a table, which is definitely an option or trying to categorize it by province. Absolutely. So, let's go through some of the things I came up with.

So, first of all, this image conveys a lot of information. It lists all of the number treaties and the dates they were signed. It also shows spatially what lands were subject to what treaties and

which lands were not. So, first you really want to think about the context, this means looking at what information is already provided in the surrounding text. In this case, there was nothing. But if you were using it in a textbook, there might be other information there. What information is conveyed only in the image? And what do you want students to take away from this image? So, for this image, students who can't see the image might not know how much land is covered by each number treaty or the exact location. If I think this is important information for students to know, you could list the treaties by date or instead you could list them by location. So, for example, you list them from like southeast to northwest, or you could also list them by size. So, from bigger to smaller. So, it kind of depends on what information are you, do you need students to know?

Another thing to consider is how much detail you want to include. So, for example, you could look up how much area is covered by each treaty or list, which, what borders each treaty. So, there's lots of things that you could describe. The important thing is trying to identify the information that your students need to get out of the image. So, here is another example of a complex image to try to scribing. Again, don't try writing a full description, but just think about how you might structure this information and what to include. So, again, I'll give you another minute and you're welcome to share ideas in the chapter or just think through it on the on your own. We'll also share a link to where we got this image from. It's a pretty large PDF files. You'll have to go to page 13 of the PDF to see it. OK. So, let's go through some possibilities. So, for this image, I came up with two ways that I might approach describing it. The first is to use a bulleted lists. So, in this example, I started by providing a sentence that kind of gives an overview of the chart.

So, it reads a flowchart describing the poverty rates of different groups of children in Canada based on 2006 census data. This gives a high level summary of what the chart provides before going into more detail. And then underneath is a bulleted list with three items. So, the first bullet describes the top level of the flow chart, which is the poverty rate for all children in Canada. And then the next two bullets describe the two branches of the flow chart, which is the poverty rates for Indigenous and non-Indigenous children in Canada. And then underneath those last two bullet points are sub points where the poverty rates for Indigenous and non-Indigenous children is further broken down into smaller groups. So, this example uses a lot of text, but by using bulleted lists with two levels of bullets, it gives structure that loosely replicates the structure of the original chart. Another way to structure this description would be to use a table. So, in this example, a sentence again is provided to give context for the table, very similar to the first one.

And then underneath is a table with four columns. So, the column, headings are a group, total children, total in poverty and poverty rate. This example is much less text heavy and it makes it easier to review and compare the data points since you can kind of move between the rows and columns. However, it is more difficult to see how some of the groups are subgroups of others. So, status First Nation children is a subgroup of Indigenous children, but this table

doesn't make that super clear. So, personally, I can't really say which description is better. They both have their strengths and weaknesses, but it does show kind of the different ways that you can structure similar information. So, another resource that I would really recommend around describing images is the POET training tool located at poet.diagramcenter.org. It has information about when to describe images, how to describe images, and has opportunities to practice. So, there's really lots of great examples there and there.

They're often really like subjects specific that are applicable to educational materials. So, it's a really great resource to check out and explore if you're doing lots of image descriptions. And finally, I would like to mention that this webinar is part of our OER production series. We have one more webinar on press books called advanced press books on August 25th. That is a follow up to our previous webinar that introduced press books. You can register for our final webinar. My colleague has put a link to kind of directly where you can find it in the chat and you can also find all of our BC campus events at bccampus.ca/events. And we will also put a link in the chat of where you can find all of the recordings of all of the webinars in the series, so you can go and re-watch those recordings. And that brings us to the end of the webinar. Again, if you'd like to download the slides and list of links, you can do so at bit.ly/beyondaccessibility. And I would like to open it up for questions.

So, I know there's probably questions I missed in the chat, so I'll try to go back and find those, but feel free to keep posting in the chat or unmute as well. If you missed the introduction to press box webinar, you can absolutely still attend the webinar on the 25th. Will be kind of jumping into more advanced things that you should be able to follow along. And we do have the a recording of a previous press box webinar that you can watch if you want to do that in advance. So, question, if others have come across a shift to preferences instead of accommodations. So, I'm using the language of preferences to account for the fact that students will benefit from different options. Whether or not they have a disability, accommodations is very much tied to being able to go to the university, provide documentation that you have a specific disability and get certain accommodations from it. So, using the language of preferences like an accommodation would likely still be a preference or maybe not.

So, it's just to kind of like expand who I'm talking about, I guess. I don't know if that's language other people have seen. But that's why I am using that language. A question, does B.C campus of insight on the use of epub three open textbooks by learners who prefers it in what context? So, press books is able to export to epub three in accessible publishing networks that are kind of outside of open education. I believe epub three is like the standard for accessible publishing. I don't know much about epub three as a format on its own. It's supposed to be very well structured to be able to be used with a screen reader. Epub, you can customize the font, the spacing, so there's lots of that customization ability through epub three. So, that's kind of the extent of my knowledge about that. Another question, I create content in French, do these, are these programs also set up for different languages? H5P and I don't know what UDI, universal, I might need clarification on that one. I do know H5P, likes the platform itself is in English.

I don't know if the platform is available in French, but there is an instructor in B.C who has worked to create H5P French activities, so it's definitely possible to use, to create other language activities in H5P. And Nina has shared that they are using H5P in Japanese. Thank you for sharing that. Good to know. And in terms of like the text-to-speech tools, I don't know about, I'm sure there are text to speech tools that do other languages. I don't know how the ones, I don't know what would do. For screen readers, for example, they are equipped to be able to read aloud different languages. The main thing is that they need to know what language that they're reading. So, this is more of like a web accessibility thing, but there's usually something in the HTML that says, this page is in French, this page is in English, this page is in Chinese. And that will tell the screen reader how to pronounce the words on the page so it is available in different languages. Do learners comment on enjoying the epub version?

I'm not sure. I'm a few steps away from the students who actually use the different formats, but if anyone has experience of students using the epub and feedback from that, feel free to share it. Are there any questions that I've missed? Feel free to repost in the chat if I have. If you'd like to unmute as well. That's you're also welcome to do that.

SPEAKER:

Hi, Jose, I figured it was just easier to jump in rather than type everything. So, I just wanted to say your content was awesome and I really love the slides and everything else. So, I've already downloaded. I was going to keep them, but I also wanted to say how great it was to see modeling so much of what you are talking about, like at the beginning, even as simple as describing your own appearance. I would never think to do that. And especially over this past two years of all of the, you know, the online and the virtual meetings and everything else that we have done, what a simple thing it was, but how easy gets overlooked. So, I picked up I have quite a few little (NAUDIBLE) and lots of notes that I was doing while you were doing that. But thank you. Just, I just want to say thank you for that because I picked up a lot of interesting things over and above just the content. So,

JOSIE:

Thank you. (LAUGH) Great. That's great to hear. Thank you for that feedback. And like the practice of describing myself as something I've only really started to do recently. With the people I follow on Twitter, there's been lots of discussions recently about describing yourself in online meetings or even in in-person spaces as well. Some people see it as not relevant and kind of just like fluff. That's not really part of the content. But a number of black and people of color, disabled people of color who are blind talk about how helpful it is. And because it's so easy to assume who you're, who's speaking and yeah, so they've made a great point about how it's a lot of white people who say, oh, we shouldn't describe ourselves, it doesn't really matter. And but for black people and other people of color, knowing who's speaking and the race of who's speaking in particular is actually relevant to what they're hearing. So, yeah, that's a practice I've started doing recently based on what I've learned from other people.

Is there a question? There's a question in the chat. Is there a tendency to emphasize adapting for visual limits? So, Alexandra, are you asking like people kind of focus for visual and then they don't consider other things? Is that what the question is?

SPEAKER:

Yeah, pretty much like in terms of all the needs, people have all different preferences. I perceive kind of an emphasis on, on sight as being the limitation that people discuss and talk about screen readers and less so about cognitive abilities and things like that.

JOSIE:

Absolutely. I think part of that comes from like, for example, web content accessibility guidelines. A vast majority of those guidelines are focused on making web content accessible for people who use screen readers, people with visual impairments. And so that bias there does come out in training and resources. And even like my own knowledge, I know that they are working on expanding web content accessibility guidelines to better account for cognitive disabilities and intellectual disabilities. But there is kind of a bias in the field and lots of learning still to do. Oh, I think we have a hand-raised, Nina. Go right ahead.

SPEAKER:

Yeah, I'm just dealing with teaching a foreign language where sometimes we're emphasizing certain skills that are restrictive, I guess. Like when I teach listening comprehension, I don't want to provide a transcript because that defeats the purpose. But then obviously, if I'm dealing with a student who's hearing impaired, I'm not serving them. So, I guess, for me, trying to find alternative ways of teaching things that are part of the skills of what I'm teaching is a challenge.

JOSIE:

Absolutely. Yeah, that's a great point. And it's a very specific example (LAUGH), but absolutely. And I don't know if I have an answer for you, but it does the need to be flexible and to use creative solutions. Kind of just a reality. Yeah.

SPEAKER:

Yeah. I guess I'd be happy to hear from other people. Yeah.

JOSIE:

Absolutely.

SPEAKER:

I'll have to bring up in a different forum, I guess, with people who are teaching the same content. Thanks.

JOSIE:

OK. Well, with that, I think I'll let you all go. Thank you so much all for your attendance and participation. I really appreciate your time. The recording will be emailed out to you once we are able to get it captioned. So, in the next week or so you should have the recording in your inbox.