

Transcript for OER Production Series: Technical Accessibility (May 10, 2023)
BCcampus session hosted on May 10, 2023
Host: Harper Friedman

HARPER FRIEDMAN:

So good morning, everybody. Thanks for coming to our Technical Accessibility webinar. My name is Harper, and I am part of the production team here at BCcampus. In this webinar, we'll be talking about the principles of accessibility and also some practical examples and best practices for making your content accessible. I'd also like to note that we will be holding a part two of this webinar, which is called "UDL and Open Educational Resources" on May 31st as part of our OER Production Series, which you can register for on our BCcampus Events page. My colleague, Maryann, is with me today as well as some of the other members of the production team. And so she'll be monitoring the chat. So feel free to put any questions you may have there as we go along. We'll try to answer all the questions there. And we'll also have a question-and-answer period at the end of the session. You can find a copy of these slides with speaker notes at the bitly link, bit.ly/technicalaccessibility for you to follow along, as well as a document with all of the resources mentioned during this presentation. It is also written on the slide here, and Maryann will drop a link in the chat. Automatic captioning and live transcripts can also be accessed in Zoom during the session. And the slides and recording will be sent to you after this session. Before we begin, I'd like to acknowledge that I am joining you today from the traditional and unceded territories of the ɫə́kʷəŋən (Lekwungen) speaking peoples, now known as the Esquimalt and Songhees Nations, as well as the territories of the W̱SÁNEĆ People as commonly known as Victoria. I have lived here for about six years, uninvited, initially to complete my undergraduate degree at the University of Victoria. And I'm very thankful for the opportunity to be here with you today. So let us know in the chat where you're from. And then we'll get started. Next slide, please.

So the topics we'll be covering today are the definitions of disability and accessibility, assistive technology, web content accessibility guidelines, how to make content accessible, and to point you towards some resources on accessibility. Next slide.

Firstly, we'll talk about what disability itself is. Before knowing disabled people myself as well as before starting this work, I only knew what we call the medical model of disability. So in this medical model, it understands disability as an individual problem, affliction, or deficit that needs a cure or accommodation. For example you can think of a person that is legally blind. They may or may not have any sort of sight. They may need some help to move around the world physically with either a guide, a guide dog, or a cane. And they may need a number of tools and accommodations like using text-to-speech on their phone or using a screen reader when using a computer. This model is used in medical settings and is also used in the, 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 as emerging when there's a mismatch between a person and their environment. With this view, disability becomes more of a spectrum that can affect different people in different ways depending on their

context, environment, and the tools they have access to. And as a product of history and culture. As an example, I am fairly near-sighted. After about 2 inches, my vision starts to get blurry. Without glasses or contacts, my poor eyesight would be a huge hindrance to my everyday life and could be classed as having a disability in the medical model. But because having poor vision in the way that I do is so widespread and normal, we have developed things like glasses, contacts, and surgery, that make it really easy to function even with poor vision or to cure it entirely. And so in that way, the tools that I have access to in the form of glasses are a product of our history and culture. Next slide.

So next, what is accessibility? Accessibility is what happens when we design and create resources, experiences, tools, and spaces that make space for four and support the diversity of our bodies and minds and centres the needs of people with disabilities to ensure that they can engage in the ways that are best for them. As noted in this definition, accessibility affects all sorts of things, both physical and digital. In today's webinar, we'll be focusing on digital educational resources. Next slide.

Assistive technology is defined by the Assistive Technology Industry Association as "any item, piece of equipment, software program, or product system that is used to increase, maintain, or improve the functional capabilities of persons with disabilities." What counts as assistive technology is a very broad category. For example, it can be low tech like a pencil grip or a white cane, or high tech like an audio recorder for taking notes. Assistive technologies can also be designed specifically for an individual like a custom wheelchair or very common like a laptop. The next few slides we'll go over some of the commonly used assistive technologies that are applicable to our context. Next slide, please.

The first are screen readers. Screen readers are a software application that allows someone to interact with the digital interface in a non-visual way. They will read aloud content on the screen and allow someone to navigate using only their keyboard. Almond screen readers are NVDA, which is a free open-source software available for Windows. Jaws, which can be purchased, and VoiceOver, which is available on all Apple devices. People who might use screen readers are those who are blind or visually impaired. Those who have a hard time looking at screens for long periods of time, as well as those who prefer to listen rather than to read. Next slide.

Next is speech tools or technology that will read texts aloud. They can be available as separate software, but are also often built into tools like Adobe Reader, Microsoft Word, and Internet browsers. People who might use text-to-speech include someone with a disability that affects reading our attention like dyslexia and ADHD, or someone who wants to complete readings while walking or cleaning their room. Next slide, please.

Zoom text is software that allows someone to enlarge content on the screen much beyond what is usually possible. It is often combined with text-to-speech. And this type of tool might be used by someone with little vision that needs content to be very large to read. Next slide,

please. So let's start with technical accessibility. When talking about technical accessibility, I'm referring to Web Content Accessibility Guidelines or WCAG. These are the minimal technical requirements that will allow students with disabilities to access all the information in a digital resource. WCAG is an international digital accessibility standard that is developed and maintained by W3C Web Accessibility Initiative. WCAG has four main principles. That content and digital interfaces be perceivable, operable, understandable, and robust. I want to highlight the first three. Next slide, please.

So the first principle is perceivable, which is the idea that information and user interface components must be presented to users in ways that they can perceive. This principle focuses on the format and display of content. Basically, all content included in a resource should be perceivable through a user's senses. That means all information needs to be available through sight, sound, and touch, or available in such a way that assistive technology could be used to translate that content for another sense. So, for example, a blind student may use a screen reader to access digital resources. The student will require text or audio alternatives of all visual content like images and video. In contrast, a deaf student will need captions or transcripts for video and audio-only content. Next slide, please.

The next principle is operable, which means user interface components and navigation must be operable. So guidelines under this principle generally relate to the structure and navigation of a digital resource. This covers things like links, headings, lists, things that give a digital resource structure, and how to ensure those things can be navigated by everyone, including those using assistive technology. Next slide.

The third principle is understandable, which holds that information and the operation of the user interface must be understandable. This means that the text is readable and understandable. The layout of a page is predictable and consistent. There are features that help users avoid and correct mistakes. Now I want to look at how these principles can be applied in the design of educational resources and look at some more concrete examples. Next slide.

So for structure and navigation, we'll be going over headings, links, and tables. Next slide.

So let's start with headings. Using headings to identify sections and subsections of a document helps readers identify structure and content of a document. Headings provide a visual cue that helps sighted readers quickly skim through content until they find a section they are looking for. And similarly, if there are headings, it makes it possible for someone using a screen reader to navigate a page or a document. A screen reader won't identify bolded or large text as a heading, so it's important to mark these headings correctly. Also by marking up the sections and subsections of the chapter as headings, a screen reader user can skip from heading to heading to get an idea about what the chapter is about, understand how the different sections relate to each other based on the heading levels, and skip to parts that they want to read entirely. Without headings, a screen-reader user would be forced to read the entire chapter through from beginning to end every time they wanted to find specific information on a page.

As such, we want to make sure that content is organized under headings and subheadings and that headings and subheadings are used sequentially. So if your previous heading was heading two, your next heading should not be a heading four or five, it should be a heading three. Next slide, please.

For links, there are a few important things to keep in mind. Firstly, the link text to describe the destination or content, the link, of the length rather, when it is taken out of context of the sentence. Someone using a screen reader can hop between all of the links on a page or have them all read out loud to them. So having descriptive links is particularly important when links are separated from context. Links that open files should be, should include the file type of the link text in link text. So, for example, if the file linked is a PDF, the link text should be the name of the file with PDF written in square brackets. Links should not open in new windows or tabs unless a text reference is provided. It can be disorienting and confusing if the user —sighted or non-sighted— is not expecting it. However, if it is important that a link to be opened in a new tab or window include that information in the link text by adding [New Tab] or [New Window] in square brackets, similar to how we denote what format a linked file is in. And finally, the web address should be available for those using a print copy as they will only be able to see the link text without the web address itself. Next slide, please.

So let's see some concrete examples. Which of these links are accessible? A poll should pop-up with four examples. The options are written on the slide here. I will also read them out. Cast your vote for which of these four examples are accessible, and you'll be able to select multiple answers. So for the first option, the example says, "For more information on web accessibility click here. where "click here" is the link text. The second option says, "For more information on web accessibility, refer to the Accessibility Toolkit," where "Accessibility Toolkit" is the link text. The third option says, "For more information on web accessibility, go to <https://opentextbc.ca/accessibilitytoolkit>" where the web address I read out is the link text. Finally, the fourth option reads "B.C. Open Textbook Review Template [Word File] provides guidelines for completing an open textbook review where the B.C. Open Textbook review template [Word File] is the link text. So I'll just give you a minute to cast your vote there. And Kelsey, feel free to make the answer pop up when most people have answered the poll there.

Alright, so if we go to the next slide and if you look at the options, the answers for the poll. So the most, most people said that the fourth one, the open text, the BC Open Textbook Review Template, [Word File] one was the most correct. And then the next one that people said was the third option, and then the second and then the first. So the actual answer is 2 and 4. So numbers 1 and 3 are not accessible while 2 and 4 are accessible. In our first example, the link text does not have any information about where the link is going, which makes it not accessible. In our third example, the web address is the link text, and this is both cumbersome. While this example may describe more or less the content of the page that we're being sent to, the web address of a page does not always accurately describe what the content of a page is. So this makes it not accessible. In our second and fourth examples, both link texts list the name of the page or file that they are linked to, which gives us the context that we need. So the fourth

example also tells us what file format is linked to there, and this makes both of these links accessible. Next slide, please.

For tables to be accessible, they have to be marked up correctly. This means that they need a caption that describes the purpose of the table. Heading cells must be marked as headings with correct scope assigned (meaning that they are marked whether they are a column header or row header). They cannot have any merged or split cells, and that there is adequate cell padding. In this example, the table has a caption. The table also has a header row with three cells. These header cells are marked as headers, and they have their scope set to column because they are column headers. Using header cells ensures that the table will be read out correctly by screen-reader technologies. The screen reader will read out cells from left to right, and when you use column headers, the screen reader will also announce what column each data cell falls under as it goes. If a table is really long, it is also recommended to provide a way for people to skip the table, which will save people from having to navigate through the entire table if they aren't interested in the content. I won't go into any more detail here, but if you are inserting tables into resources you create, you can find specific instructions on how to ensure that tables are accessible in the Accessibility Toolkit and their chapter on tables, which I will be providing a link to at the end of the presentation. Next slide, please.

Next we'll briefly touch on multimedia. Next slide. If your resource includes audio, such as a podcast, an interview, recorded lecture, or a song, there should also be a transcript of that audio. The transcript should include the speaker's names, headings, and subheadings for navigation if it is long. And all relevant audio content, including all speech content, relevant descriptions of speech, and descriptions of relevant non-speech content. Next slide.

If your resource includes video, all relevant visual information needs to be conveyed in an audio description or transcript, and all relevant audio information needs to be conveyed via captions or a transcript. Captions are text that is synchronized with the audio and the video. Audio descriptions are for someone who can't see the video and needs descriptions of visual content shown in the video that isn't conveyed through the audio. So these can sometimes sound like screenplays where perhaps the action of a character on screen is described in this audio description as they are doing them. A transcript includes the same information as with audio descriptions but may also include relevant descriptions of visual content. If you're creating a video, you want to try to plan and design a video so that people who can't see the video still know what is going on without needing an alternative format. You can do this by having the people in your video or perhaps a narrator, describe any important visual information while recording. So an alternative format is not required. Next slide.

So here's another poll. Who might want captions on videos? It has five options that are also written on the slide. The options are, number 1, people who are deaf or hard of hearing. Number 2, people with auditory processing difficulties. Number 3, people for whom the language of the video is not their first language. Number 4, people who like crunchy loud snacks. And 5, all of the above. I'll give you just a minute or so to choose which option you think

is correct. Alrighty, So the results are in, and most of you are correct. The answer is all of the above. Next slide if you want to see the answer on the screen there. Yeah, there we go. Alright, Next slide.

So let's talk about visuals. This includes visual cues, colour contrast, and decorative, and informational images. Next slide.

So visual cues include any visual elements that you're using to convey information. So, for example, maybe the correct answer is always in green text. Or maybe all terms that are listed in the glossary are bolded. Or maybe important points have a little star icon beside them. Visual cues can be really effective as they can help a student quickly find information and highlight what is important. They are great to make a resource more engaging. However, if using them, keep in mind that some people may not be able to access them. So we always want to use visual cues consistently. If you're using a bold to identify key terms, do not use bold for anything else. If learning objectives are in a black text box, that is the only colour that learning objective should use. As I said before, ensure visual cues... Ensure visual cues that convey information are accessible in non-visual ways. So, for example, we want to make sure a screen reader will be able to pick up on them. And finally, keep in mind to never use only colour to convey information. Next slide, please.

So paying attention to the use of colour and colour contrast in web content is important for people who have low or poor contrast vision, are colourblind, or for those who use a device with a monochrome display, or who may be using a print, print copy in black and white. In addition, information should never be conveyed by colour alone. On the top left, there is a bar graph that is charting student device preferences. It uses the colours red, blue, and green to differentiate between students who prefer desktops, smartphones, or laptops. When the same graph is seen in grayscale on the right, on the top right, rather, it becomes really difficult to be able to tell which bar corresponds to which category. The red and the green look almost identical, at least to me. This may be a serious barrier for someone who has a hard time differentiating between colours or someone who has a printed version of the resource in black and white. This problem can be solved by using colours with higher contrast ratios and by adding labels to each bar, as shown in the bottom example there. Adding labels to each bar ensures that the meaning of this graph is not only being conveyed by colour. Next slide, please.

If you're looking for a tool to help measure colour contrast, I would recommend contrastchecker.com, which allows you to test the contrast between colours. And will give you a pass or fail ratings based on WCAG standards. Next slide.

So here's another poll. Is this colour combination accessible? The answers are, number 1, yes, it is accessible. Number 2, no, it is not accessible. And number 3, I'm not sure. The hex code of the colour of the text in the foreground is 2f9700, which is a light green colour. And the colour of the background is the lightest white. hence the code is all Fs. I'll give you just a minute to submit your answers. And then afterwards we'll have a chat about it and we'll look at the

results. Alright, so the results are in. So the highest, the highest answer is, "I'm not sure." Followed closely by, "No it is not accessible," and then, "Yes, it is accessible." Not being sure is a totally valid answer. If we go to the next slide, we'll have a chat about what the answer is.

For the most part, this colour combination of a lighter green text on a white background fails accessibility colour contrast guidelines. One thing you may notice here is that there are the letters AA and AAA. These are levels of accessibility defined in the Web Content Accessibility Guidelines. So, for example, a website might say they conform to WCAG AA, or might conform to WCAG AAA, which is a higher level of accessibility. Most websites only conform to AA. So this contrast checker will evaluate colour combinations based on both the contrasts requirements for AA and AAA. In this case, this colour combination fails both AAA and AA if used for regular text, which is a text size smaller than 18 points. For large text this colour combination passes AA but still fails for AAA. The colour contrast checker will also tell us the contrast ratio here. In this case, it is 3.79:1. WCAG AA specifies that the minimum contrast for regular text is 4.5:1. So to make this accessible, we would have to make the green a little bit darker. Next slide, please.

The next number of slides will be focusing on images and different strategies for describing images. When talking about images, we need to make a distinction between decorative images and functional images. Decorative images are images that are used primarily for design and do not convey any content. Or they convey content that is already described in the surrounding text. As such, they do not need to text descriptions. Functional images are images that convey important non-text content. For functional images, you have to consider what information would be lost if those images weren't available. This information needs to be provided in a text format. There are three ways to describe, rather, to provide text descriptions for images. First, you can describe the image in the alt text field. This is sometimes referred to as the alt tag or the alt attribute. The second way is that you can describe the image in the surrounding text or caption. And the third is to create and link to a long description of the image. Next slide, please.

So here, here's an example of a decorative image that appears beside a question in a math textbook. The text reads, "A bag of potato chips weighs 48 grams. How many milligrams is that?" Then below that there is an image of an open bag of chips. The image of the bag of chips helps break up the text and makes it more engaging, but it is more decorative than functional. No information would be lost if the image was deleted. Next slide, please.

In contrast, here's an image taken from a sociology textbook, where it was included to demonstrate that correlation does not equal causation. If this image were not included, the example would be lost and the point would be less effective. As such, it does need a description. A possible description is "A line graph shows a close correlation between the divorce rate in Maine and the per capita consumption of margarine 2000 and 2009." Next slide please.

Here's our last poll. Which image description is best? There's an image on the slide that we're trying to describe, along with three options of image descriptions. The three options are,

number 1, the Wong-Baker faces pain-rating scale. Number 2, a collection of happy, neutral, and sad cartoon faces with numbers 0 to 10 underneath. The number 3 is a scale that uses cartoon faces to illustrate the different levels of pain that correspond to a numbered scale from 0 to 10. Zero is smiling, 2 is a small smile, 4 is a straight face, 6 is a slightly sad face, 8 is a big sad face, and 10 is a bigger sad face that is crying. I'll again just give you a second to put in your answers for the poll. All right? And yes, with a resounding result, you are, almost all of you are correct. It is number 3. So the first option might be a good caption for the image, but it does not really describe the image. The second option gives a little bit of a description, but it doesn't really tie everything together. And the third option is the best description. The first sentence gives a general overview of the image, and then the next sentence gives additional detail. One thing to keep in mind when describing an image is that context is really important. Depending on the image, it might not need as much detail as other contexts. It all depends on what the students are expected to get out of the image and what information would be lost if that image was not there. Next slide, please. Next after that. Thank you.

So now let's talk about the different places you can describe an image. The most common one is the alt text. Alt text is a short text alternative for an image for those using screen readers. And they can be able to access that instead of the image itself. The alt text will also be displayed if images aren't loading due to weak internet connection. Depending on the tool you're using to create your OER, you'll be able to add the alt tag when you upload the image or when you edit the image. When creating alt texts, there are some things to keep in mind. First, the text will not appear visually in your resource, so it can be accessed by text-to-speech technology. Second, there is no need to include the words "image of" in the alt text. A screen reader will announce the presence of an image before reading the content of the alt text. And finally, alt text is meant to be short. Keep alt tags under 125 characters, including spaces and punctuation. If an image requires a longer description, describe it in the surrounding text or at a long description. If an image is decorative or described in the surrounding text, you can leave the alt text blank. This will ensure that the screen reader will just simply skip the image. Next slide, please.

As mentioned, you can also use the surrounding text to provide the same information as provided in this image. This is often the best option for complex images because it makes the information available for everyone, not just the one used, ones using the alt tags. If an image has been adequately described in the caption or surrounding text, you can either provide a few words description of the image as the alt tag or not provide alt text at all. In the image shown here, the caption reads, Stó:lō woman weaving baskets, which adequately describes the image. Therefore, alt-text is not required. Next slide please.

Complex images such as charts, graphs, diagrams, maps, and more will likely require descriptions that are longer than an alt tag can fit. In these cases, you will need to create a long description for the image that students who can't see the image can access. Long descriptions can be a few sentences, a paragraph, or even an ordered list depending on the image and what the needs are. We know that this can be tricky at first and we'll be covering image description

more in depth in the second webinar that we have coming up on accessibility. Next slide, please.

When thinking about how to describe images, here are some things to keep in mind. In terms of what to describe, we want to focus on content, on the content and purpose of the image. What is the image trying to convey? What information would be lost if the image was removed? And note that this will likely depend on the audience and the context. In terms of how to describe, make sure you are trying to be as objective as you can. You want to be concise. And if the image is complex, you want to go from a general thing to a more specific thing. Next slide, please.

Now I want to talk a little bit about math accessibility. This is an area that we're still learning about, but it is a topic that we get questions about a lot. And one that we are working to learn more about. The most common mistakes that we see with regards to math accessibility is that authors are using incorrect symbols for math equations. This generally is in the case where books... Sorry, this is generally in the case of books that are not math books, but use these symbols for basic equations or to convey things like negative degree temperatures. I've put a number of symbols up on the slide. The first row uses different symbols that might be used to denote multiplication. However, a screen reader would only read the middle symbol as a times or multiplication symbol. The first symbol would be read simply just as x. And the second one would just be read as a dot. In the next line, the first and last symbols or hyphen and an em dash. And as such, screen readers would not just simply not announce their presence unless their settings are changed. So only the middle is something a computer would read as a minus sign. The next line shows a division sign and a forward slash. And the last example shows a fraction. A computer would read the first fraction as either "one-half" or "one over two." And it would read the section... second fraction simply as "1, 2." Another thing to keep in mind is the different ways we use math symbols. E.g. in chemistry, you might want to say that an element has a charge of negative one or positive two. But when talking about addition and subtraction, you would want to use those same symbols as minus and plus. Next slide, please.

When dealing with more complex math equations and formulas, using symbols is no longer enough. There are two ways to make math accessible. For those of you using Pressbooks, the first and best option is to create equations using MathML or LaTeX, which are both mathematical markup languages. And then to use MathJax to render those equations. MathJax will translate the markup into accessible, high resolution equations. As long as the markup prioritizes the meaning of equations over the display, then screen readers will be able to accurately interpret the equations. Next slide, please.

If MathML and LaTeX are not an option, then the next best option is to provide an image of the equation and provide an alternative text description. I provided an example on this slide of how this equation might be read. It reads m equals begin fraction, m sub 0 over begins square root, 1 minus begin fraction, v squared over c squared end fraction end square root end fraction. The key thing to think about when it comes to describing more complex equations is how to do away with ambiguity. In the given math equation, it's tempting to read the denominator simply

as "the square root of one minus v squared over c squared," but that makes it unclear whether the second fraction of v squared over c squared is within the square root or outside of it. In 2014, the BCcampus conducted a user testing session with visually impaired and blind students who indicated that it would be very helpful for them to place an audio file of the formula or equation alongside the equation, allowing the students to hear exactly how the formula or equation should be interpreted, so that is also something you can consider as well. Next slide please.

Two resources I found very helpful for learning to describe images are first BCcampus' own Accessibility Toolkit. And two, this document on Complex Images for All Learners. Both of these links will be dropped in the chat there. And also it can take a lot of time to get better at image descriptions. I know that I am still learning and improving even as I keep doing them. And so just be patient and just keep practising on them. Next slide, please.

An important part of this work is testing for accessibility. When testing, there are a number of options. The first is automated testing, which means using accessibility checkers. Accessibility checkers can help catch things like skipped heading levels, missing images, missing alt text, or poor colour contrast. However, they cannot guarantee that your resource is accessible. Manual testing is when you test content with different assistive technologies. For example, using a screen reader to navigate a page. If you've never used a screen reader before, they take some time to figure out. But it's a very useful testing tool if you're not sure if something you created will be interpreted correctly by a screen reader. And finally, there is user testing, which is when you get students with disabilities to test your content. This is the best way to get feedback on your work and will give you the most accurate understanding of this content accessibility. Next slide, please.

If you are publishing web-based resources, I would highly recommend WAVE, an accessibility checker. It is super easy to use and will highlight most accessibility problems. You can either paste a link to the page you want evaluated or install it as a browser plug in. I should also note that a lot of software includes built-in accessibility checkers, including Microsoft Word and PowerPoint. However, again, keep in mind that using an accessibility checker doesn't prove a resource is accessible, but they can be helpful in identifying accessibility issues that you might have missed. Next slide, please.

A lot of accessibility considerations I've talked about so far are things that can be kind of just checked off a little list. Do your images have alt text? Check. Do your tables have a caption? Check. Do your videos have captions? Check. I've started by focusing on these checklist items because they are concrete and easily actionable. In addition, these items make up the 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. Students face access

challenges that are not addressed in standard accessibility checklists. And it does not ensure the equal access to learning outcomes. Next slide, please.

Before we finish, I want to, again, point you to the Accessibility Toolkit, published by BCcampus. This toolkit covers a lot of the same information that I covered today and often in a lot more detail. It also provides an accessibility checklist, activities, and links to a series of webinars on inclusive design. The toolkit can be accessed at opentextbc.ca/accessibilitytoolkit. Next slide.

And finally, I would like to mention that this webinar is part of our OER Production Series. We have three more webinars coming up. The first one is we have an "Introduction to Pressbooks" webinar on May 17. Next up, we have the second webinar on Pressbooks called "Advanced Pressbooks" on May 26th. And finally, we have the follow-up webinar, follow-up to this webinar on accessibility called "UDL and Open Educational Resources" on May 31st. In the "UDL and Open Educational Resources" webinar, my colleague Josie will build on what we know about technical accessibility to explore how we can go beyond that minimum accessibility requirement. We dig more into concepts like the social model of disability and how UDL can be applied in the design of OER. We explore multimodality as well as the benefits, challenges, and considerations of digital versus print formats. We dive more into math accessibility and how to write effective image descriptions. So it's a great place to go forward in your accessibility journey. And you can just, you can register for all of these webinars by visiting bccampus.ca/events And next slide. That just takes us to the end of our webinar. A reminder that you can download the slides and links document here at the bitly link, bit.ly/technicalaccessibility And that the recording will be available to you after this webinar. Thank you for attending. I know we covered quite a lot. So if you have any outstanding questions, feel free to ask them. I'm now going to open the chat so I can read that.

MARYANN KEMPTHORNE:

Harper, we did get a question in from Glen. An astute question there about Excel cells. You know, you talk about complexity, so he was asking in Excel cells describing calculation as comments, how would screen readers handle that? So what can we tell him?

HARPER:

Yeah, I'm not actually sure about that. Josie, do you... I think Josie is here. Do you know anything about Excel and screen readers?

JOSIE GRAY:

I know that as long as you design your Excel sheets in a specific way they can be accessible to screen readers. So I did put a few links in the chat that might be helpful. One to the Microsoft Guidelines for Accessibility in Excel, and then another video demonstration on how screen readers work. So the main thing to keep in mind with screen readers is they are there to enable non-visual access to a digital device. So a computer or a phone or anything like that. So they give people lots of information to allow them to navigate something like a computer without having to actually see the screen, and without having to use a mouse. Everything with the

screen reader is generally controlled through keyboard navigation. And everything on the screen is being communicated back verbally or through braille to the person who's using the screen reader. So they are very robust devices and generally very hard to use when you're first learning. They take a lot of practice. But very relevant for all the things that we're talking about. So not a direct answer to the question, but some resources to explore.

HARPER:

Thanks Josie. And thank you for the question, Glenn. Alright. I don't see any questions, any further questions so far. I think my email should be on the slides, on the first one. Any testing work well for Moodle? That's another one I don't know about. I don't work with Moodle. But do Josie and Maryann know anything about testing for Moodle?

MARYANN:

I believe that some members of the BCcampus community are working on this so you can reach out usually to your teaching and learning centres. I know, for example, Thompson Rivers University has been doing something on inclusive design at the LMS level, so we're more of a publishing team, so it's a little bit hard, but definitely on the network there'll be people who will be helping with those technical accessibility issues.

HARPER:

For sure.

JOSIE:

I would add that a lot of the things Harper shared in the webinar today are applicable across platforms. So things like using headings, using descriptive link text describing images. All of those things are applicable whether you're creating educational materials in a Word document, in Pressbooks, in Moodle, a lot of those things are applicable.