

Transcript for Teaching Talk #13: Creating and Delivering Accessible PowerPoint Presentations

Aron Fazekas: Welcome everyone. My name is Aron Fazekas and I'm an Educational Developer with the Office of Teaching and Learning. Good morning to you all. Before we get going today, I first want to start off by just acknowledging that we are all in various places and that these places that we are in are all governed by different treaties and relationships to the land, and as we consider these relationships, I think it's really important to remember our collective responsibilities to each other, as we each consider how we can enact inclusion and respect with each other, in our daily lives and actions.

So just a few housekeeping items, so the session today is going to be recorded and we'll have a link available later on for those who weren't able to join us today. Our presentation is a little bit longer than some of the past webinars, but we still intend to have a Q&A session at the end. It may run a little bit over time, so if you do need to leave the webinar, you know, to get to other things, by all means, but we'll try and get to everyone's questions, nonetheless. So, I'm just going to quickly pass it to Shehroze who has a few more technical things to discuss, and then we'll pass it to Athol... Shehroze maybe stepped away. So, for attendees, so you'll notice that your audio and video are off and that will be the way it will remain for the duration of the presentation. If you do have questions, you'll see a Q&A tab at the bottom of the ribbon of the screen. So, if you click on that, that is the place to ask your questions as the presentation goes along. Unless there are really burning questions, I'm going to hold those all until the end and then organize them and moderate those questions for Athol to respond to at the end of the presentation. So, I think with that, today I have the pleasure of introducing Athol Gow from McLaughlin library and he's going to talk to us about accessible PowerPoint presentations. So, with that, I'll turn it over to you.

Athol Gow: Perfect. Thank you, Aron. Good morning everyone, welcome to "Creating and delivering accessible PowerPoint presentations". I thought I'd start by telling you a little bit about myself. I am the manager of Library Accessibility Services in the library. One of our main responsibilities, sort of, that we do, is providing SAS registered students with textbook and reading material in alternate formats, and I also provide assistive technology training and support to students and some faculty and that involves technologies like text readback, screen reading, text magnification, speech recognition, and so on. I've been doing this for about 20 years now and I got interested in the question of document accessibility because we noticed fairly early on that some documents pose bigger barriers to our students than other ones did. So, I got involved in a number of accessibility committees on campus and I've done training in the area of word, PDF, and PowerPoint accessibility in the past, and so here I am. Anyway, let's just move along.

Athol Gow: So, what I'd like to cover today - and by the way, I have a lot of material as it turns out, so I'm going to try and go through stuff as quickly as I can, and try and keep it brief, but there we go. So, what I'd like to start with is essentially to help you understand, I think, the dimensions of document accessibility a little bit better. We'll go from there to looking at what the accessibility for Ontarians with Disabilities Act has to say or what the requirements are for educational materials like PowerPoints then we'll go right in - we'll roll up our sleeves and start looking at how to make the various aspects of making PowerPoint content accessible, and you can see there's a real shopping list of stuff there. After that we'll look at how to save PowerPoints to PDF or some of the issues that are associated with that and I have some tools and resources to share at the end.

Okay, so here we go. So, people have often wondered, you know, or you may be wondering, what does he mean when he talks about a document being accessible or inaccessible or a presentation being accessible or inaccessible? I think the best way to talk about that is to share a model that was developed by an organization called the World Wide Web Consortium and their web accessibility best practices is called the Web Content Accessibility Guidelines or WCAG. The last two iterations of WCAG have been organized around four principles which are gathered together under the acronym of POUR, and POUR stands for Perceivable, Operable, Understandable, and Robust, and this is a really great way to understand accessibility and not only for the web, but it applies quite well to other digital information formats as well. So, if we want our PowerPoint accessible or a PowerPoint presentation to be accessible, the information sort of in there has to be perceivable by individuals with vision or hearing impairments. PowerPoint is a very visual medium, and we want to ensure that someone who cannot see is able to access that visual content in another way. We want to make sure it's operable by someone who may not be using a mouse. The good news is that Microsoft Office is very well designed for people who are using sort of non-standard input methods. So, if you're using a screen reader, for instance, you can use Microsoft Office products with your keyboard or you can use it with speech, using speech recognition, or other non-standard input devices. We also want to make sure that the structure and the content of the PowerPoint is understandable and that means that it is easily navigated and that the content in it is well laid out and that the vocabulary that's used in it is appropriate and finally, we want to ensure that the PowerPoint file is robust, and by robust we mean that it can be used by individuals who may have earlier versions of Microsoft Office or who may be working on another platform or that if we convert that Microsoft - sorry, that PowerPoint document to PDF, that the content that we want to share is actually retained in the way we want it to be. So Perceivable Operable Understandable and Robust. Those are great ways to understand accessibility.

Athol Gow: So now let's look at the - just take a moment to look at the Accessibility for Ontarians with Disabilities Act and, you know, how that relates to the instructional materials that we create. Basically, the AODA, as it is called, was developed, kind of, with five standards to regulate accessibility or improve accessibility for persons with disabilities in different areas of Ontario's social and economic life. So, the standards are customer service, information and communication, employment equity, and the built environment, and you know, I'm in information and communication. So basically, all these standards have been pulled together into this regulation called the Integrated Accessibility Standards and three of them have direct bearing on the development of educational resources like PowerPoints. So, section 14.2, which falls in the information communication area, requires that public websites and web content must meet the W3C WCAG 2.0 level AA. So, in other words, the stuff has to be - the material, websites, and web content, have to be created in an accessible way, from the get-go and not upon request. We should note that as a public institution, that we're exempted from having from our private internet or intranet sites being - essentially, these sites aren't covered by that. So, sites that are behind authentication are not covered by this section. It's strictly public websites. The section that immediately follows that, requires that educational materials would be provided to persons with disabilities in accessible formats upon request, and finally the customer service standard, which is now section 80 of the Integrated Accessibility Standards. In section 80.46(2) has the following statement: the goods and services, so for us, that would be the education we provide, the goods and services will be provided to persons with disabilities in a way that respects their dignity and independence, that is integrated, so in other words they're using the same resources and the same other course content as well, and that it's also of equal value. So, you kind of might be sort of interested - if we look over at that image, I have on the right of way scales, we can see that the parts of the AODA require us to act in a proactive way, that we have to - you know, we have to change the way we do things, and that, in turn, promotes systemic change, makes things better but other parts of the AODA are more about accommodation. It may be - it's a little bit confusing because some things seem to want us to change how we do things and be more proactive and other things seem to be saying, "no, wait and do this upon request". So maybe the way to think about this is essentially to sort of make things accessible that we can make accessible. So, it's great that you guys are attending this PowerPoint presentation today and you can make your PowerPoints more accessible and other documents as well, because this really probably involves mainly changing your workflows, and once you understand that, then it's quite easy to do. For more complicated material like videos, for instance, maybe the ticket would be to try and minimize - at least try and minimize the challenge of making that material accessible in the event that you're asked at some point to do so. So, by the way you design your material as you go, that you can actually reduce some of the challenge of making that video accessible, sort of, down the road.

Athol Gow: Okay, so moving on then to PowerPoint accessibility and our best practices here. The interesting thing about PowerPoint is that it's quite easy to make the PowerPoint as a file accessible, but there are other dimensions to a PowerPoint presentation where you really need to take accessibility into consideration. So, I mean, it's also, of course, a visual presentation that's delivered face to face in a classroom, on a variety of equipment. It's also a teaching tool for supporting learning and, you know, these things add another sort of layer of complexity to how we create PowerPoint presentations, and we're going to touch on those things as we go.

So just diving right into it then, starting with formatting and layout then. In order to - just to start right at the top, we have to look for PowerPoint templates or themes that have good text background contrast and that are quite simple. So, this is particularly important if you are in a face-to-face class and showing your PowerPoint on a projector or a television screen. If people are using templates that have been made by your department or by your college, it would be a good idea to follow up with them to ask about the accessibility status of those. It's quite easy, when you are making PowerPoint templates, to inadvertently remove the structures in them that make those templates more accessible, and so, it probably be a good thing to follow up. Another thing that I just want to sort of caution people about is using PowerPoint 365 design ideas, or at least to use those cautiously. You've probably seen that button on the 365 ribbon and if you click on it, you'll see that suddenly your slide is kind of transposed into something that has a lot of pizzazz. Now the interesting about it is the contrast levels in some of those design ideas are very good, the things where I would be a little bit more concerned about would be essentially that some of those backgrounds could be distracting for some students, and also some of the font sizes tend to get very small in the design ideas, and so a couple of things to be mindful of. One thing we want to do is, when you're making a PowerPoint presentation, to give each slide a distinct title, and this gets back to our POUR principle again and the idea of being understandable. We want to ensure that that it's very easy to see the structure of the presentation, to navigate to information. So, having a distinct slide for each title is good for that. We also want to use the built-in slide layouts where possible. On the right of the screen, you can see we have a screen capture from the slide layout in PowerPoint, and some people prefer not to use that. They just use a blank screen and then put their own content on, but the thing about the slide layouts is that they have structure built into them that's important for accessibility. So, for instance, they have a title box that is essentially a header and in addition to that the slides are organized so they read in the appropriate order and those can be lost if you choose not to use that.

Okay, continuing with formatting and layout, another thing you want to avoid is essentially using photographs or textured backgrounds for your slides, especially if the content is busy. So, you can imagine, this might be hard enough for you to read right now on your computer at home, but if this was being shown on a projector you could sort of see that the background is actually interfering with your ability to perceive the text. So that effects of perceivability. We encourage people to use sans-serif fonts like Calibri or Verdana. So again, serif fonts are the ones that have little curly bits at the at the ends of the letters and sans-serif fonts do not.

Athol Gow: So, the balance of opinion on this is that while serif fonts are better for reading and print, that sans-serif fonts are better for reading on, you know, electronic documents like this. Another thing that's important to talk about is limiting your bullet points on your slide to 5 to 6 and keeping the bullet points brief. The danger with this is that by having too many points and having them too wordy is that these text and slides can essentially be overwhelming for some people and the other problem is, of course, is that the more text you have on the screen, the more the font size is going to shrink, and so that's going to pose perceivability problems for somebody with a vision impairment. I start to get worried when the slide starts falling below 22 points or so. Another benefit to keeping your slide number, your bullet points limited and brief is that you avoid what you could call the dueling and info source dilemma and what I mean by this - I support SAS students with note-taking and one problem I hear quite commonly is that students will go to a class and the instructor has very text-dense slides and they're struggling to write that content down, and at the same time the instructor is actually talking about stuff that doesn't quite relate to the slides. So, then the student has this dilemma of trying to get this material in the slide but also try and catch the material that the instructor is saying that doesn't actually match up with the slide. So, then they're kind of trying to figure out which material they want to capture, or they need to capture. So, by keeping your bullet points brief I think it sort of gives you structure to your presentation, but it doesn't cause confusion to students as to what to focus on. Now another thing that we talked about is: not using colour alone to convey information and this is a kind of a sort of web accessibility practice that's been around for a long, long time and, you know, the example that people usually sort of talk about is the idea of an online forum where at the top, it says that the questions in red are mandatory and, you know, if you are blind and you can't tell what the colour is then that creates problems. So again, using colour in that way could create difficulty, and I'll have an example of that later on. Okay. Oh - missed a slide somehow. Oh sorry, no we didn't, I guess I had tables coming up next. Okay, pardon me.

With tables, I think the first thing you could say is actually to use tables where you can. The best way to present tabular information is a table and screen readers are able to read tables. The issues that come up with accessibility are about tables that aren't uniform. So, in other words where we have cells that are split or merged. The most common reason for doing this is to create a two-row header structure, where you have - a category is in the upper row and the subcategories below it, but the trouble when you do this is, it makes it very hard for the screen reader to take a header value and a row value and triangulate to a particular number because all of the cells have been split and merged. Unfortunately, there are no tools in Office that will let you correct that. You could do it in Adobe professional if you have access to it. One solution that you could use is to try and combine, to collapse that two-row header into a single row by what you use in the header titles, or the other options might be to divide that table actually into two. In either event, if your table does have a header row, be sure to - or header columns, pardon me - is to go into the table tools in PowerPoint and make sure that it is checked off in the upper left corner. Okay so, finally you can add an alt text description to more complicated tables and we'll talk a little bit more about how to do that in a second.

Athol Gow: So now we're getting into images and this is really the kind of extremely important component to using PowerPoint. So, I'm just going to take us out of presentation mode here for a sec because we'll talk about this. So, it's really important - basically, because the images are so critical to PowerPoint, to provide an alt text description for essentially every graphical object or image in your presentation, including the decorative ones and you might say well why do I do that for the decorative ones if it's not very important. I think the trouble is if you are somebody who's blind and using a screen reader to navigate a PowerPoint presentation, if they encounter an image that has no alt text on it, they don't know whether it's decorative or not. So, we have to help them out and tell them that it is. So how do add alt text to an image. Well basically, if I click on the image and then right-click on it, it brings up a menu where - right now, I'm using Office 365 from Mac and so if I right-click on that, I see Edit Alt Text. if I was doing this on Windows, I think I would right-click and then in the right-click menu I would choose format image, but if I choose Edit Alt Text it brings up – just going to move this over a little bit - it brings up the alt text window over here and basically, if this image was decorative, I could say something like "Heart, decorative". If it was sort of somewhat important, we could add a brief description of that image, usually one to two sentences just in this window here. By the way if you are using an earlier version of PowerPoint like 2016, you would see a title box and a description box and if you are using Office 2016 then put your description of the image in the description box. The screen-readers, for some reason, don't read the title box. Now, say this image of the human heart, as you can see this is actually very, very detailed, so it's showing us the blood flow through the chambers of the heart and the various arteries and veins that are coming and going, and so on. If this is key information and you had to do a much longer description of the image, it's probably not a good place to actually put it. Just because the ability for screen-readers to interact with alt text is quite limited. It's a bit like if you can't pause sort of in the middle of an alt text description and then go back a sentence or go forward a sentence, you're kind of stuck. So, it's a bit like, you know, we've all been in that position of somebody leaving a phone message for us and basically you just want to get the phone number at the end of the message. You have to listen to the message three times to be able to hear that final number, at least I do, so it's the same idea, so we don't want to put somebody in that position. So, our recommendation or our suggestion is to actually add sort of lengthier descriptions of images in your PowerPoint to an appendix in the document or add them in a separate companion document. Now you'll notice here, this is a really interesting thing, there's a "Mark as decorative" checkbox and this is something that's new in Office 365 or in PowerPoint 365, it's also in Word as well. If I click on "Mark as decorative", basically what happens is when the screen reader goes over this page, it's like the image doesn't exist, it just completely gives it a pass. The problem with using this is that the person who's using or reading your PowerPoint presentation also has to have Office 365. If they don't, then this image just becomes an untagged image and they're again wondering what it is. So there's one of those examples of trying to make a presentation robust, where the better strategy would just be to put a tag in there saying that it's a decorative image. Also notice that there's a "Generate a description for me" button here and this is something new that Microsoft has brought out in this version. If I click on that, artificial intelligence looks at the image and then comes up with a pretty ridiculous descriptor of what it is.

Athol Gow: So yeah don't rely on the AI descriptions for this and really the only reason I would use them is if you want some assurance that the robots aren't coming after your job, you know, today, maybe six months from now, but not today. Okay so moving on again, we'll go back to presentation mode. Oh, one thing I would add is that, as you're giving a presentation, it's good to get into the habit of describing visual content in there. I mean, in ways, visual content is there for a reason and so it's good to incorporate that into the presentation and it's good for other reasons as well that we'll get towards the end.

Very quickly, if you'd like to use smart art in your PowerPoints, smart art is problematic from an accessibility perspective. You do have to capture, sort of, all the individual graphical parts and add alt tags to them and even if you do that then actually the whole thing turns into, kind of, a big word salad, and in person I don't think it's any sort of understanding of the relationships between the information or the overall structure - whether it's a cycle or whatever that the smart art is. Probably a better idea then is to essentially fill in your smart art and then capture it as an image using a tool in your OS and then just bring the image into your PowerPoint presentation and just put an alt text tag on it.

Just sliding along here to charts and graphs again, we want to ensure that this material is accessible. One thing we can do, of course, is add an alt text tag to any charts and graphs that we use, but we can do a little bit more than that because you're noticing on the Left, we have a graph. These are graph, I borrowed them from Penn State University but the graphs are a mini poll of people's computer operating system preferences and the one on the left is inaccessible and the one on the right is more accessible, and maybe ahead of me on this one, but the reason why the one on the left is inaccessible is because colour alone is being used to convey information so in other words the Windows, Linux, and Macintosh users are only being identified by colour and if you're blind, that's not helpful. If you are colourblind that's not helpful either because you notice that they're using red and green in the same paragraph. But again, we can enhance the accessibility of graphs by essentially not only labeling our axes here but also labeling chart bars. So, the accessible bar graph is using colours with better contrast but it's also labeling the bars as well, indicating which one is Windows, Linux, and Mac, and it's also giving the values in the bar graph as well. So that's a much more accessible way of presenting that information.

Good news is that if we forget everything that we've talked about today, there is an accessibility checker that's built into Microsoft Office into programs like Word and PowerPoint it's been in Windows Office versions, I think, since 2010. It made its way to the Mac in 2017 but there's a couple of things in here I want to illustrate very quickly. So, if I'm using a PowerPoint for Mac 365, I want to just click on the review pane to bring that up. If I'm using PowerPoint from Windows, I'm going to click File and then Information, Check for issues, and then Check accessibility, but if I click on review, there we go, I'm going to click on check accessibility and you can see I've got a number of errors here that come up and these are kind of quite common things.

Athol Gow: So, for instance, if I click here, I've got missing alternative text on content placeholder 5, slide 12, which happens to be the one I'm on. So, to fix that again, we click on that image and we can just edit alt text, then we put in something like screen capture. Okay I probably shouldn't have done when I'm rushing. Accessibility checker. You notice once we do that, if we go back, that issue has been dropped from the accessibility checker here. One thing I should also point out is that as you pick these options you also get an explanation of why you should fix it and steps to fix it underneath, so that's very helpful. You notice that this accessibility checker picked out the fact that we have a table with merged and split cells, so that was good, it was able to identify that. Now here's a common issue that you'll see with PowerPoints as well. It's going to prompt you to check the reading order and if I click on that, it's indicating that we need to check that out in slide 4. So if I go to slide 4 now, what it's saying is that there's something on that slide where the reading order is not correct and the way to see that is then to go Home and we're going to go to Arrange and then Selection Pane, and what we see is the content on the slide. So here we've got the title, placeholder 5, and then placeholder 2. So really, what we want to see is the title read first, followed by the placeholder text, followed by the image we have, and it's kind of counterintuitive but this is presented backwards in the Selection Pane here, but basically, the issue is that placeholder 5 is coming before placeholder 2. I can grab that pull it up so that it reads it at the end. So now that material will read in the correct order and if we go back to our Accessibility pane, we can see that that's been corrected. So, one thing that I would say - we'll just go back to our presentation - let's see we are here. So, by all means, use the accessibility checker because it is getting better with each version but don't rely on it exclusively, you need to know a little bit about PowerPoint accessibility because there are some errors that the accessibility checker won't catch. I mean, if you want to design your own slide backgrounds, it won't tell you about text-background, contrast issues, it won't stop you if you use a photograph in the background, for instance, like I did, there was no mention of that. So again, I encourage you to have a knowledge of document accessibility and PowerPoint accessibility issues as you're working on this stuff.

Okay, very quickly, I'm just aware of the time here. there's been a lot of interest in essentially taking a narrated PowerPoint and turning it into a caption video. Now again my understanding of this is that unless that video is being posted on a public website, you would not have to caption it. If it was posted for instance on a private website or an intranet like Courselink, basically, you would have to caption it upon request. I just wanted to point that out again. That's my understanding and I think we're going to reach for some more clarification on this and follow up on that. So, there's been some interest in how to do that and I just have a couple of ideas here for how you could do that using free tools and not having to buy any additional video accessibility or video editing tools. Basically, if you export your narrated PowerPoint presentation as a video you could upload that video to YouTube and of course, if you have a Google account, YouTube has auto captioning that can be applied to the video. The neat thing with auto captioning is that you can go in and correct it and improve it, and in that way make a captioned YouTube video. Another option that I just learned about yesterday which is very exciting is Microsoft Stream. Microsoft Stream is part of our Office 365 tools and again, you can get to it if you're using the PowerPoints online through the email system.

Athol Gow: If you go up to that little, sort of, dot grid in the upper left corner, you can find Microsoft Stream in there, but just like YouTube, Microsoft Stream is able to take a video. You can upload a video to it, you can caption it, and you can edit the captions. My understanding is that neither YouTube nor Microsoft Stream currently have the tools that make it very easy to work in an academic setting, where you may want to give access to a particular video, to a particular class, but nevertheless Microsoft Stream is playing to a much smaller audience, to essentially the UofG campus and again, any video that you create with Stream could be added to Courselink, for instance, or embedded in Courselink. Just some thoughts: as long as we're talking about creating captioned video, one thing you could do is consider working from a transcript if you're creating a video. This does a couple of things. The transcript could be used for a captioning file that you could upload, but also it could be given to somebody with a hearing impairment who could use that while you're sorting out issues of getting videos captioned. So maybe that's one way to minimize some of the difficulty of creating captioned video. Another thing to think about is, basically, you can avoid the need for audio description by describing visual content in your presentation. So, we're aware of the fact that if somebody was hearing impaired, they need to work with captions in order to be able to understand audio content in the video, but if somebody is visually impaired they also need to be able to work with the visual content in your video, and so that's what audio description is, and unfortunately it is something which can't be done automatically. It's a human process, pretty much, and it's time-consuming and expensive. You could actually avoid the need for audio description, again, by getting in the habit of describing that key visual content in your presentation. That way it's captured in the audio.

So, a couple of thoughts: saving to PDF, I just want to make something very clear for anybody who is using PowerPoint on a Mac. Unfortunately, right now, if you've done everything that we've seen in the diagram - oh, I think we had time for a poll here. Shehroze is going to post a poll. Basically, I'm just wondering if people in the audience would be interested in a how-to for how to narrate and caption PowerPoint presentations using free resources like YouTube or Microsoft Stream. If you're interested then you can just click yes, if you're not, click no and we'll just take a few minutes to let you fill that in. Okay looks like there's a lot of interest in a resource like that. So, we'll talk about how best to deliver something like that, whether it's another presentation or whether its resources on the Open ED Academic Continuity site or so on. Thanks, that's great. So as I was saying, it's really important to point out that if you are using PowerPoint from Mac, whether it's 365 or 2016, and you've gone through all these steps that we described, of adding alt text and using properly structured layouts and things like that, unfortunately, that does not get carried over into the PDF, when you save as a PDF. That's unfortunately how it is. If you convert from a Word document to a PDF you can save those accessible structures in both Office 2017 and Office 365 for Mac, but you can't do it in PowerPoint. Not a lot of suggestions for that, unless you can make your PowerPoint and then ask a colleague, or somebody, or fellow staff member who is using Office for Windows, to take that file for you and convert it to PDF. On the subject of Windows users, just a reminder that you should never use the print to PDF option to take your PowerPoint and make it PDF. When you do that, the same thing happens to Mac users. You lose all that accessible structure of the alt text, tags on the images, the slide structures and so on.

Athol Gow: The only way to do it is essentially go to Save As, choose PDF and click the best for electronic distribution and accessibility radio button and then that accessible structure should carry over into the PDF. One other little caveat: if somebody was thinking to go through and use that "Mark as decorative" option for alt text in PowerPoint 365, then go directly and just make a PDF out of that, and then just not have it tag the images as decorative, it doesn't look like that "Mark as decorative" is actually retained when you export the PDF unfortunately.

Okay, very quickly, I have some tools and resources we can share with you guys. For people who are still using Office 2016, you might want to have a look at their Accessible PowerPoint template sampler. If you're interested in those issues of colour contrast, maybe not only in PowerPoint, but in other programs you're using as well, Paciello Group, which is an accessibility company, has a great free colour contrast analyzer for both Mac and PC, it's great for making sure that the colours that you choose to meet WCAG standards. WebAIM is a great website for finding accessibility information, they have a section on constructing a POUR website, if you're interested in learning more about Perceivable Operable Understandable and Robust, that's the place to go. Microsoft has lots of resources on Office accessibility, you can check that out. McLaughlin Library, we've got info on making your digital media projects accessible. Great service at the University of Guelph, the Digital Accessibility Resource Centre, these folks do training, if you have a question, they will answer it person-to-person. Finally, again, lots of good information on the Academic continuity site. Thank you very much. I went over a little longer than I wanted to, but we can take questions now if anybody has any.

