DARLENE MCLENNAN: Okay. Good afternoon, or good morning, depending on where you are coming from today. For those who don't know me, I am Darlene McLennan, I am the manager of the Australian Disability Clearinghouse on Education and Training, or ADCET for short. Today I am excited to be welcoming you to the webinar, Screen Readers: Everything Access and Teaching Staff Should Know. This webinar will be live captioned. To activate your captions, click the CC on your tool bar which is located on the top or the bottom of your screen. We also have captions available via the browser and Jane will make that available if anybody wants to access it through the browser. Before I begin, I want to acknowledge that I am on Lutruwita, Tasmanian Aboriginal land, and in the spirit of reconciliation, ADCET respectfully acknowledges the Lutruwita nations and also recognises the Aboriginal history and culture of the land and pay my respects to Elders past, present and emerging and to any Aboriginal people who did not make Elder status. I also want to acknowledge all the countries that people are participating from today in this session and acknowledge their Elders and ancestors and their legacy to us and any Aboriginal and Torres Strait people who might be participating in the webinar today. I am going to hand over to Darren Britten, our National Technology Officer, to hand over to our panelists and to talk through how today will run. Sit back and enjoy, and over to you, Darren. Thank you.

DARREN BRITTEN: Thank you, Darlene. Thank you, everybody, for joining us today. It is a topic we've been looking forward to sharing for a while, which is going through some of those basic 101 bits around screen readers and sometimes those questions that are difficult to ask, or you're too afraid to ask. We are going to cover some things today around what is a screen reader, what does it do and how does it actually work? They are going to share their unique insights and experiences to help you make the world just a little bit more screen reader friendly. So we are going to go through in order, if you've got any questions as we go, please use the Q&A function to put your questions in. We'll get to those towards the end of the webinar today.

I'd like to also just acknowledge, in the spirit of reconciliation, the Traditional Custodians of Country throughout Australia and their connections to land, sea and community. We pay our respects to Elders past, present and emerging, and extend that respect to all Aboriginal and Torres Strait Islander peoples today. While virtually connected today, we are presenting geographically dispersed and acknowledge the Wurundjeri people of the Kulin nation in Victoria, the peoples of Stoney Creek nation in Tasmania and the Cammeraygal people in New South Wales.

Our first panelist will be Andrew Downie. I might just start by asking Andrew if he can give a history of himself and where do screen readers come into your being and your world?

ANDREW DOWNIE: Thanks, Darren. I have been around a lot longer than screen readers. I did all my school education and my tertiary study almost up until I started my Honours at uni, taking my notes in hardcopy Braille. The first screen readers I used were in the MS‑DOS operating system. When Windows and Mac started becoming popular in the 90's, blind people were quite concerned because it appeared that we may lose access to computers. But I am pleased to say that I think now, we have better access to computers than we ever had.

So what is a screen reader? A screen reader is software which is either built into the computer, or it can be software that's installed. Unlike what the name suggests, the screen reader doesn't read from the screen, it reads from further back in the computer.

Can you stop…

DARREN: I'll just let you screen share there.

ANDREW: Thanks.

DARREN: You'll take us through an actual screen reader at work.

ANDREW: There we go. So what I am going to do is to let you hear a screen reader. Now, what I should mention is that a screen reader presents information that is normally presented on the screen via synthetic speech and/or electronic braille display. Electronic braille displays are little, or perhaps not quite so little devices with plastic pins that pop up and down in the shape of braille characters.

Here, we have a Word document and this is what the screen reader sounds like and the speech I am using is a Microsoft voice. One of the things about speech synthesisers is that they are also built into the operating system.

SCREEN READER: Heading level 1. My Dog Myffy. Heading level 2. Style, Heading 2, What Breed of Dog? Style, Normal. Myffy is a tri-coloured Pembroke Corgi.

ANDREW: So what we have there was the screen reader telling me that there was a level 1 heading and a level 2 heading and then the normal style. Using formal heading styles, whether it is a Word document or web page, are really important. They do two broad things for me; they give me the idea of how the document is structured, so I know that a level 1 heading will be a major heading, so a chapter heading, a level 2 the next level down and 3 next one down from that. What they also let me do is to jump from heading to heading with the screen reader.

SCREEN READER: Style, Heading 2, Where Do They Come From? Appetite. Heading level 2.

ANDREW: I'll just go back to the level 1 heading.

SCREEN READER: Style, Heading 1. My Dog Myffy.

ANDREW: That’s very important. You can do that too. If you turn on the navigation pane in Word, you can…

SCREEN READER: Participants can now see your screen alert.

ANDREW: You can also navigate by headings, so very important.

SCREEN READER: Style, Normal. Myffy is a tri‑coloured Pembroke Corgi.

ANDREW: I can adjust the speed.

SCREEN READER: Cardigan. Pem… Cardigan. Myffy is a tri-coloured Pembroke Corgi.

ANDREW: You probably find that a little bit fast. I’ll slow it down again.

SCREEN READER: Rate 20, rate 15.

ANDREW: Now it is back to where it was. Another important thing when you are using synthetic speech is to be able to adjust the punctuation level. If I am just reading for recreation, I don't necessarily want to hear every comma and full stop, but if I am proof reading or writing code, then I do. So now, we get…

SCREEN READER: Page 1, section 1. Style, Normal. There are 2 types of Corgi, from Kerrie Aitken to all panellists…

ANDREW: That was a message from Zoom coming through.

SCREEN READER: There are two types of Corgi, Pembroke and Cardigan.

ANDREW: So now, it’s reading the comma and the full stop.

SCREEN READER: Symbol level, none.

ANDREW: I can switch it back to none. The other thing that I can do is to get some information about the type of font that's being used and other attributes of the document.

SCREEN READER: Style, Normal. Arial, 12pt, default colour. Spacing, 1.2 lines.

ANDREW: That can be very important, particularly when laying out documents, and so forth.

SCREEN READER: Cardigan. Graphic. Myffy is mostly honey brown with white on her chest and paws. There is also some black on her back. Here’s a relatively large and she is sitting on grass looking excited. Graphic.

ANDREW: You heard the screen reader say "graphic" so it knows there is a picture there, but the screen reader can't interpret the image. I say that with a slight caveat because there is some progress being made in that area, but screen readers in the foreseeable future won't be able to interpret charts and diagrams and so forth, so it is important to put all text onto the image and we'll be sharing links with you where I've done some demos of how to do that.

SCREEN READING: Heading…

DARREN: I might just quickly ask, Andrew, while you are going, how intelligent is the screen reader? Is it doing any navigating of its own?

ANDREW: What I meant to mention, and I forgot, was that I can have it read the whole document to me without stopping, or I can navigate by word, character, sentence, and so forth. There is the navigation I showed you jumping by headings and so forth. It also has its own search facility which can be very useful, particularly on web pages. So yes, they are quite clever in weeding out information that I don't need to know and giving me the stuff that I do need to know. That does depend again on the structure of the page, whether it is a Word document … or a web page.

So tables, they used to be a real pain for screen readers, but they are now quite clever.

SCREEN READER: Table with 6 rows and 3 columns, one column, 1 style table grid.

ANDREW: So it tells me the size of the table, 6 by 3.

SCREEN READER: Row 2, Monday.

ANDREW: Let me go back to the top row.

SCREEN READER: Row 1.

ANDREW: So I will go across.

SCREEN READER: Column 1 Sydney, column 3 Melbourne. Column 1.

ANDREW: We'll go down to the next row.

SCREEN READER: Sydney column 2, 18 degrees, Melbourne column 3, 10 degrees.

ANDREW: Talking about being intelligent, what the screen reader is doing there is reading the column heading and reading the cell that I am focused on. If I go down…

SCREEN READER: Tuesday, row 3, 8 degrees. Wednesday row 4, 13 degrees.

ANDREW: Now it is reading the row heading along with the cell that I am on. That requires some diligence on the part of the people setting up the table, combined with doing some ‑ the screen readers can do some configuration as well. I didn't say that very well, but I think you know what I meant. I am going to quickly show you one more table. This is on a web page, and this is getting a bit more complicated.

SCREEN READER: Table with 5 rows and 4 columns, caption, animals divided into sea and land-dwelling, sea-dwelling divided into fish and mammals and… caption, land-dwelling divided into reptiles and mammals. Row 1, sea-dwelling fish column, one through two sea-dwelling.

ANDREW: Now we have a cell that merges ‑ that spans two columns.

SCREEN READER: Land dwelling, reptile column. Three through four, land-dwelling.

ANDREW: Back to the left.

SCREEN READER: Row 2, sea-dwelling fish, column 1, fish. Sea-dwelling mammal, column 2.

ANDREW: So we have - under sea-dwelling, we have fish and mammals. If we go down…

SCREEN READER: Row 3, flathead.

ANDREW: It doesn’t say flathead very well.

SCREEN READER: Sea dwelling mammal, column 2, porpoise.

ANDREW: So, mammal, porpoise.

SCREEN READER: Land-dwelling reptile, column 3, snake.

ANDREW: You get the idea. Now, doing that on a web page is relatively easy. Doing it in Microsoft Word is more fraught. I have found how to do it with the NVDA screen reader, but I'd suggest not doing more complicated tables in Word. Even this table I suspect some screen reader users would find a bit tricky, particularly if you are doing it via synthetic speech, you are having to remember a lot of information all at the one time. I think that's all I need to say for the moment, so I'll hand back to Darren.

DARREN: I might quickly, because you touched on briefly there, Andrew, the image that's there. So what can and cannot be read by a screen reader?

ANDREW: Text can be read, images cannot. As you might have noticed, when I pressed the command, it can actually tell me that the foreground and background colours, but it can't read images, so icons, pictures of things, it can't read them at all. So it has to be textual information. Pictures of text, these days screen readers have optimal character recognition built into them, which can be helpful, but it is not an ideal situation if we have to resort to that.

DARREN: Excellent. I'll get you to stop screen sharing there, please, Andrew.

Okay. Our next panelist is Kiah Buhler and she comes to us from Deakin University, a student there. Kiah, would you be able to give us a little bit of history of you and your interaction and where screen readers fit into your life?

KIAH BUHLER: As Darren mentioned, I am a student at Deakin University. I am in my second year of my Bachelor of Criminology. I started at Deakin as a sighted student, while I have been vision impaired my whole life - not to the point where I have needed a screen reader, but I lost a significant amount of sight about two thirds of the way through my first trimester and unfortunately, I wasn't able to finish that trimester and I had to learn to use screen readers in order to go back to uni. I have had experience with a few different screen readers. I started off with Windows Eyes and moved on to NVDA and JAWS and now I am a Macbook user, so I mostly work with Voiceover. Yeah, I think that's about it.

DARREN: I was just muted there. I was just saying that's great, thank you, Kiah. What equipment can you use with the screen reader?

KIAH: Most people would associate a screen reader with computers and these days, all computers come with an inbuilt screen reader, and if they don’t, there are a few screen readers that you can install. Other than that, phones and most tablets will have screen readers on them, but smart watches, both the Apple Smart Watch and Samsung Smart Watch, TVs, some smart TVs have some screen readers in them, gamers are excited because the new PlayStation 5 has a screen reader inbuilt into it. Most modern and smart devices - screen readers are becoming a lot more common and we are seeing them in a lot of devices. But in general, in regards to academic purposes, the majority of computers and tablets will have screen readers available and you can also download other ones.

DARREN: Do the commands vary between the different screen readers and devices?

KIAH: There are 3 major screen readers that you can get on Windows, which is Windows Eyes, NVDA and JAWS. For the most part, the commands don't vary much between these three. An important thing to know with screen readers is they also rely on the inbuilt system commands that we would use everyday ‑ Control + C, copy, Control + V for paste ‑ those kinds of commands. Those commands still function within screen readers. When it comes to screen reader specific commands, most computer‑based screen readers will actually still use the same screen reader key, so a lot of screen readers will have something called the JAWS key or the NVDA key or the VO key for Voiceover. In a lot of cases while this might be something extra, pretty much all of them can be changed to Caps Lock. So things do - in regards to screen readers specific commands, for the most part, no, like L will often mean next list, R will be next item and this is the same with JAWS and NVDA, and it is a while since I have used Windows Narrator, but I believe Windows Narrator as well. Things change when you move over to Mac and Voiceover. This is something I’m still learning and teaching myself. If you don't go onto the Quick Nav version of Voiceover, the keyboard layout is completely different to what you would expect in JAWS or NVDA. If you go into Quick Nav, it is a little bit more similar and closer to what Windows users would recognise. And outside that, obviously, when you go and choose devices that don't use keyboards, so swiping, such as phones and tablets, Apple devices and Android devices are supposedly fairly different. Talkback and Android screen reader is one of the areas I don't have any experience with, but from what I have heard, it is definitely not as ‑ I have heard that some iPhone and iPad users have had some difficulties transitioning to Samsung devices, so from what I understand, commands and gestures used are different in those two, but I don't know the full details in that area.

DARREN: Can a person using a screen reader read information as fast as their sighted colleagues?

KIAH: This really depends on the screen reader, the information being presented and the person reading. So a lot of blind people, including myself, will have experience of sighted people hearing our screen reader and going, "How can you listen to that? That's so fast." The majority of us have heard that hundreds of times. It really depends on the screen reader. For example, in my case, absolutely not. So, as well as my vision impairment, I also have an auditory processing disorder so hearing things quickly can be difficult for me. But again, this one depends on the user. Some people can get through things really fast and some people can't. I know for me, it can honestly take a couple of hours to read a textbook chapter in my specific case. Also, again, it depends on how well the information is presented, how well it is formatted and layout to be as accessible as possible. So there is no real black and white answer to this.

DARREN: I think like most things, it is grey, a lot is grey, which is another ‑ I mean, I forgot to mention at the start we are trying to dispel a few myths that are around. If we touch on some of the questions and myths that you might be aware of at your institution it would be good to know. One of those which I hear quite often is, is it only blind people who use screen readers?

KIAH: No, this is a major myth. While blind and visually impaired people are definitely most associated with screen readers, they are absolutely not the only people who do so. Pretty much anybody with a print disability, and if you don't understand what that is, it is a disability that impacts someone's ability to read visual materials - dyslexia, some learning disabilities, visual processing disorder, in some cases, autism, ADHD; all of these which can affect reading visual material, anyone under that aspect can use a screen reader. So as well as being visually impaired, I am also autistic. And I know that a lot of people in the autistic community, especially those who use AAC, Augmentative and Alternative Communication devices, actually enjoy using screen readers because they find it easier than processing visual information. Again, it is popular among some people with dyslexia, there is actually a screen reader app called Speechify, which was specifically designed for people with dyslexia. It is more common amongst blind and visually impaired people. We are absolutely not the only people who use them.

DARREN: Technology has changed so much, people are using assistive tech in their smart phones, whether they consider it to be they’re using Google Voice, Siri, a whole range of things, so assistive tech is creeping into everybody’s life.

KIAH: Dictation, which is another popular one used by blind people and other people with disabilities, is becoming, again, just generally popular amongst the population, Dictation.

DARREN: Excellent. Thank you, Kiah. We'll touch back with some of the questions coming up shortly. I'll throw over to Doug McGinn. He is joining us from… I would say ‘the beach’, but we couldn't get the wifi working at the beach, so Doug is joining us on his phone today, so apologies if we can't get the camera up, but we don't want to be jealous with your location, Doug. Doug, can you give us a bit of your background and where you intersect with screen readers?

DOUG MCGINN: Thanks, Darren. I am an accessibility advisor at the University of Tasmania, and I have worked there for quite a few years. Like Andrew, when I studied, I did everything underneath a closed circuit television which is a large magnifier and the screen readers, when they came about, did make my life so much more efficient being able to read by listening to text so much quicker than trying to look at it with large print underneath a closed circuit television, a screen magnifier. I obviously have some residual vision, but if things are text‑based, I can read material quickly. Kiah, who spoke very, very well ‑ it is embarrassing talking after you ‑ she talked there on an important point on the fact that screen readers aren't just sitting at the laptop doing my work, it is also when I am on a bus watching Netflix, I am using my screen reader to work out what program I am going to watch or when I pause or fast‑forward. It is all facets of our life, whether it be boiling a kettle or a stovetop, there are a lot of devices now.

DARREN: This is an impromptu question that's popped up because it is another myth that gets me when somebody mentions that you watch Netflix and they go, "You are a blind user. What do you mean you watch Netflix?”

DOUG: For someone like myself with residual vision, I might put the screen quite close, but there is also the wonderful advent of audio description and most programs - you'll notice some programs on ABC and SBS now have audio inscription. You can turn it on and off, but lots of the new films and TV series within Netflix and other streaming media will have audio description. It has the same audio for everybody, but in the very quiet parts, it will describe what's going on. There is nothing harder for a blind or vision impaired person when they watch a 60-minute murder mystery and in the last 15 seconds they say, "And the murderer was…” ‑ and they flash up a picture of the murderer. You’re thinking, “Right.” With the audio description, it will interact between audio and provide a descriptive. It also has an educational aspect because if we are providing YouTube clips, it is important that we provide them in captions for deaf and hard of hearing. Similarly, if there is important facets of the visual that is happening, it is important that that's also audio described for any audio or vision impaired person using that material.

DARREN: Excellent, thank you, Doug. I know I put you on the spot, but thank you, that's one of the things I hear quite often.

My next question for you is: Where do screen reader users get training?

DOUG: It is an interesting one because all students when they come into TAFE or uni need to be able to read or write at a certain level. Obviously there are some entry level courses where they will assist with that toolkit, but generally, students with a vision impairment need to be able to use their assistive software at a reasonable level. They don't have to be super users like Andrew, they can be more average like myself, but they still need to have a good level of file management because if they are getting lots of Word documents sent to them, then they need to be able to file them away into folders that make sense, alphabetical lists, things on the desktop, they need a good understanding of where files are. One of the things I did want to mention there was it is not the responsibility of the university or the TAFE to train up the student at that level. I think that's a bit of a myth, that it is important for the education institution to assist, but certainly, we are not here to train up the student. Jane was possibly going to put up a URL of a really good preplanning toolkit that ADCET has developed for NDIS participants with different disabilities including those who have a vision impairment who are entering higher education or vocational education and training. It provides a really good understanding for the participant, the family and the NDIS worker as to who is responsible for what, as in who is going to pay for my JAWS at home and who is going to train me up with regard to different levels of need at the institution?

DARREN: Thank you, Doug, which kind of leads into the next one. Where can a screen reader user go to get support?

DOUG: It is interesting, this one. As I mentioned, students should have a reasonable level of skill, but quite often it is the access to material or access to the hardware on campus, as in I can't access my material, I need a designated person and not necessarily the accessibility advisor. Most universities and TAFEs will have a transcription service that more than likely is in the library or a similar type area and they will have a designated contact person who will assist them with getting access to the material. If the material is presented in PDF in its text, they may need some assistance in how to access that material or may need it converted into Word. Similarly, if there is a new laboratory with certain software they need to access, it might be up to the accessibility advisor or the transcription service to help them access that software. One of the things I wanted to mention was peer mentoring. It is one of the most important things that I learnt when I was a student myself and when I became an accessibility advisor many years ago was putting students in contact with other students of a similar ilk. If you have got a blind student who is trying to understand the learning management system, which has changed, we’ve all got different learning management systems, ours is called MILO. It is not intuitive - quite often it is visually intuitive. There will be something flashing that shows you where to go. If you are looking at a certain part of the screen with your screen reader, you may not know, but if there is another student who has used JAWS or NVDA, they will have more than likely gone through and learnt how to manage that learning management tool. It is important to put some of the students in contact with others. There is 2,000 staff at the University of Tasmania, and as far as I know, I am the only JAWS user. I actually talk to the two students who use JAWS if I have got an issue in MILO and I will ask them how they do certain things. I think that peer mentoring is a really important thing.

DARREN: I couldn't agree more, Doug, that's where you get some of that expertise from, which is another myth that I'd like you to answer. Are screen reader users the experts in accessibility?

DOUG: The resounding answer is: No. I am an expert in what I require. So I have a certain level of understanding of my assistive software. Like I said, it is embarrassing going after Kiah, she was talking about different platforms and operating systems, jumping from Apple back to PC, whereas for myself I am in a busy workplace and I concentrate on what I need to know. However, there are some situations where user testing is a good thing. It is important to get consultants in to check accessibility of softwares that our institutions are using, but there are times where some user testing within your institution could be a good thing and that might mean, Kiah, we'd like to employ you for two or three hours to check out our new learning management system to let us know what we think of it, but we shouldn't be expecting students to do that for free. We should be building in a budget for that to happen as well. The answer is, certainly screen reader users have a good understanding of what they require.

DARREN: Thank you, Doug, we'll get back to you with some of the other questions. I think there are a couple which align with what you have been speaking about as well.

I wanted to quickly go through a couple of key points here now about what we can do to make your world a little bit more screen reader friendly. I am Darren Britten, I am the National Assistive Technology Project Officer for the NDCO program assigned with the Australian Disability Clearinghouse. My journey with screen readers is I don't use one. I have played with them many times, I have played with different ones back from Windows through JAWS when I had access to one, because it is an expensive piece of software, through to NVDA which is pre‑software, and I can use it for some basic testing, and that's as far as my expertise with the screen reader goes. In terms of making learning content accessible, that's an area that I have been involved with for a couple of decades now.

What can you do to make your world a little bit more screen reader friendly? Andrew touched on this and it goes across even into learning management systems and that’s use headings. One of the key things, use headings and give your document some kind of structure so there is navigation. Without that navigation, it is really difficult to move around. It is fine when you've got a small amount of text that's there like Andrew's demonstration of Myffy, but imagine a 600 page book that's been converted that you just got the text off with no heading structure, no subheadings and page numbers? How do you find anything that's in there? It is just a big block of text.

Use the accessibility checker in Microsoft Office. Most institutions are using Microsoft Office or Office 365 as the business software that's there, and I think all of the Microsoft products inside the suite have the accessibility checker. Andrew will correct me if I am wrong. There is a link to that that we'll be sending out to everybody as well. It can provide meaningful links. Things like "click here", means nothing to a screen reader if you are skipping by the links. I am sure everybody has probably experienced that and if you start to get a longer page where there is lots of those, how do you distinguish one from the other? Provide some meaning and context that goes there. That's also with your other content, why are there 5 links on this page? Are they there for a specific reason? Did you want someone to look at them, or bookmark them for later? Provide that meaningful structure around your content, a brief description as to why you provided the link is a good idea. Here is a video that we'd like you to go and read through. The following is a journal article on such and other. You only need to read the first two pages, because it might be a 10 or 100 page thing, so give some kind of context of what you are expecting people to go and read.

I have touched on that navigation and sorting with files, give your files meaningful titles, naming everything and I have seen this over way too many years, the number of files that are downloaded that are called "lecture". I don't know which subject it is for, which week it is for, what topic, so it is assuming another whole level for people to go and sort out later. It is a little thing you can do. Give it a meaningful title, your file names. Say what you mean when you are recording describing your function. This is becoming more apparent with COVID, but even prior to that, we are doing lots of screen capturing, so people are recording the screen, showing something in operation and they are moving the mouse around saying if I just go over here and click on this and then I do this, you'll see the result. That means nothing. You actually say what you are doing, then hit this button, or then go and select whatever it means. If you just go to the menu and select, that means nothing. Give it some extra real context. Say what you mean.

A great one, particularly with some first year students coming in, if you know some of the keyboard shortcuts for some of the software you’ll be using, make that available for students - as Kiah touched on, keyboard shortcuts would be fairly similar in a lot of programs, particularly on Windows, so providing some of those out to students helps them navigate and even whilst you are in Zoom and Teams, et cetera, give them the command keys to quickly mute.

DOUG: Are you talking about that for all students, not just for vision impaired students?

DARREN: For all students, just let people know you can quickly mute your microphone by doing Control + A, but what is it in Zoom? Alt + A. So you can quickly mute and turn your microphone on and off.

A key thing that I have seen quite often, and I'll get you all to chip in here if this is something that you've become aware of or missed out on some important information because it wasn't put up‑front. I have gone into a few learning management systems into content and you scroll down the page and hit some bright red text that says, "Important. Due date has been changed." It is right at the bottom, it doesn't have a heading or anything else. You won't find it because the screen reader is not going to quickly scan the page. We'll touch on the skimming of that in a moment. Key thing that you can certainly do at an institutional level is include screen reading users in project development. If you are upgrading your LMS, get them involved. Having other students there and doing things is ‑ you'll get feedback from actual users, lived experience, it’s fantastic. Capitalise on that.

DOUG: Just with regard to important information being a long way down in your document or web page, the tips and tricks you are providing for screen readers, if there is 3 screen readers at your institution, there’s going to be 55 with learning disabilities who are using assistive software, there is going to be 550 students who are linguistically diverse. They’re all going to benefit from these tips and tricks with regard to laying out the information in a more appropriate manner. That’s an important thing to talk about.

DARREN: We are touching on getting it to universal design for learning, and we could spend another 5 hours on that and there is the launch of a new e‑learning thing that we'll touch on. Most importantly is ask somebody at your institution, whether that's staff and/or students - as an academic or as the teacher, you can also ask the student. Was that Word document fine that I sent out? Was this accessible? Certainly, you are not going to bail somebody up in front of a class and ask them for that, but you can just ask for feedback. Did everybody find those documents fine? Was that good? And leave that open. Ask, don't assume, because that's where we start to make all kinds of issues.

There is a few links. There are some links which we'll have up with the slides to the Australian Disability Clearinghouse on Education and Training, ADCET. There is Zoom hot keys and keyboard shortcuts and keyboard shortcuts for Microsoft Teams. I suggest everybody go look at those and include them in your meeting. It is a great thing to do. Improving accessibility with a Microsoft Office accessibility checker, so for those that haven’t used it, use Quick Guide from Microsoft to go through that. There is a disability awareness e‑learning which is a fantastic resource for all of those basic understandings of various disabilities as well.

Andrew has his own set of guides which are on ADCET which are great, they might be old, but it is still perfectly relevant and it is a guide to the hierarchical headings, heading 1, 2, 3, et cetera, and the importance of correct document structure. There is also some upcoming ADCET guidelines on online access for tertiary students and staff who are blind or vision impaired which covers a whole bunch of some similar UDL things that … universal design for learning, touches on tips and etiquette for screen reader users, et cetera.

A question that I quickly had, I'll stop sharing now. There are two quick questions and we'll get into the other questions. Skimming ‑ skim reading content, is that possible with a screen reader?

ANDREW: Sort of. Particularly if there is structured headings, it is possible to jump from one section to another quite quickly. What we miss out on though is the ability to very quickly just see something further down, oh, that's what I am looking for. Reading with a screen reader, whether it is with a braille display or synthetic speech is a very linear experience and so we don't have quite the same flexibility, I guess is the word I am looking for, just to see something that we are looking for. There are tips and tricks, so headings, the search facility can be useful if you think you know what you are looking for, but there is still that whole linear experience that's going to make skim reading more problematical.

DARREN: Time’s an aspect that’s there. I know something I’ve experienced for many years is that - here is a chapter to go and read, sighted people might be able to get through that chapter in 10, 15 minutes, skimming through, but as a screen reader, studying some of this content, how long does it sometimes take depending on the content to get through that with a screen reader?

KIAH: Apologies Darren, could you please just repeat that? I had you and my screen reader talking at the same time.

DARREN: Which leads to another question. I was just saying with reading a chapter it might take ‑ I might be able to read in 10 minutes, or something, how long might that take with a screen reader?

KIAH: As I mentioned before, with me, there is the extra challenge of having an auditory processing disorder, so no‑one's experience is the same as everybody else's, but for me, going and getting through a chapter, having the mix of relying on a screen reader with APD, it can actually take a couple of hours.

DARREN: Yep. Exactly.

KIAH: It is very tiring.

ANDREW: I have a friend who can go through a chapter with synthetic speech and she hears all the words, but if she is then given a comprehension test, she fails. But if she reads it with the electronic braille display, she goes very well. So again it is individual differences and some people can process information very well auditorily, whereas others find braille a much more effective means and some find a combination of speech and large print and all sorts. Very varied.

DARREN: We have got a few questions here, so we'll put them up to the panelists. Screen readers can read the alt text and if there is no text there, what does it tell you as a screen reader if there is no text?

ANDREW: It will say ‘graphic’, or sometimes it reads the file name.

DARREN: If a file name comes out of the system, it is 101157.jpeg.

DOUG: Remembering that it is not just pictures, it could be a table or a graph that had been inserted as a picture rather than text. If it is a table of alt text, then we can read it. If it is a picture of a table that's been inserted, we won't be able it read it as well.

DARREN: Andrew, you touched on that style and formatting of text being read out. Should we advise people to turn on the reading of the formatting and styles if there is important information in the specific document, for example, highlighting specific phrases and words? Are some styles for bold, italics, font type, better to use than others?

ANDREW: Certainly, I would almost always have the formal styles turned on in Word, so headings, normal style, list style, those sorts of things. If you bold text in, say, the middle of a sentence, it is possible to have the screen reader read that, but it does start to get very verbose, so it becomes a bit of a juggling act, do I want to hear every time the colour changes? If that's used sparingly, that can be reasonably effective, but if it is every second line, then it does get very wearing indeed.

DARREN: It largely depends on the content.

ANDREW: It certainly does. Bolding individual words and so forth is a bit of a ‑ what's the word I am looking for ‑ it is a bit of a double-edged sword, I can get the information, but it can get very tedious. Again, it is the sort of thing that's so obvious visually, but particularly with synthetic speech compared to a braille display, it can get very labour intensive.

DARREN: Another question. Some students, I am told, from Sandra, some students are told that the newest Kindles don't have a screen reader anymore; is that correct?

ANDREW: That was the case going back a decade or so, the Authors Guild in America launched litigation against Kindle because they set their providing speech output was violating their copyright. They lost the case, but Kindle took the speech off anyway. I am not sure where we are up to more recently. Certainly, if you use the Kindle reader on Windows you can certainly get speech output by using your screen reader, but I don't know if the others know, but I don't know what the story is with the Kindle devices itself.

DARREN: Can I have some clarification of the screen readers that may be used for children with dyslexia?

ANDREW: That's a good question.

DARREN: Kiah, you touched on that.

DOUG: I would say that every student, every child would need an individual assessment and in some situations, a generic LD bit of software like Read and Write might suffice, but it is a bit hard to say this would be the best way to go. Certainly, there are some students with vision impairment and dyslexia who would use something like Read and Write and that would suffice. I think they need to be individually assessed. Just something with regard to bolding, with regard to educators that might be here, quite often in an exam paper you might have to answer three questions and the "3" will be underlined or bolded or something like that. It is really important if you are going to be bolding certain things within exam papers or tests or assessments that you do think about, okay, I do have a blind or vision impaired person in this unit, let's ensure that the questions, the instructions are not just visually intuitive and similarly, let's make certain that all the questions, as Andrew mentioned, that they are able to be read in a linear format and that there isn't ‘please interpret this graph’ for example. If there is ‘please interpret this graph’, well, let's do an alternate question for Bill who might be doing the exam as well, let's do it in text format.

DARREN: Kiah, you were just going to talk to the dyslexic software?

KIAH: So as Doug mentioned, look, it is not necessarily something that's going to help everyone with dyslexia, just how some blind and vision impaired people would prefer other screen readers over others. The specific app I had mentioned before, it’s an application called Speechify, and it is an application you can download on mobile devices or it is a browser extension, I believe for Google Chrome. It was designed by someone with dyslexia and it is mostly a case of copying and pasting the text into the application and you can essentially sort of - the selling line is you can sort of turn written books and words into audio books in a way. So you can create sort of like folders that kind of read out like chapters in a way and you can also, as well as having it read out, you can adjust the font and the size of the text and then with reading you can ‑ so with a lot of, for instance, if you were listening to an audio book on Audible, you only have certain speeds you can go to, whereas with this app, you can change the speed and just the way that it speaks to you. So it is something I personally have found very helpful in regard to my textbooks, being able to listen my textbooks through this app, but it was specifically designed for people with dyslexia in mind. So the app is called Speechify.

DARREN: It’s a very useful app as well.

ANDREW: There is also Voice Stream Reader for the iPad and iPhone which is a nice tool. Don't forget the immersive reading tools within Microsoft Office, they can be very helpful. Some of it is free, some of it is expensive. So Read and Write is quite expensive. ClaroRead is another one. There is increasingly some nice either inexpensive or free tools available as well.

DARREN: We have got lots more questions. I don't think we'll get through them all. Does the panel think Read and Write Gold is a useful screen reader?

DOUG: It is horses for courses. For some students and some applications, it’s brilliant, for others, not. So again, it needs individual testing. Preferably, do a bit of testing yourself before you purchase and try and talk to some peers in your same class with a similar situation.

ANDREW: Read and Write is specifically for people who have reading difficulties, not for vision impairment. Just keep that in mind.

DARREN: Two quick ones, so are there particular challenges navigating PowerPoint presentations?

ANDREW: Depends on who writes the PowerPoint.

DARREN: Exactly. One thing is definitely avoid a PowerPoint and in Word, adding new text boxes because they are technically invisible to a lot of users. So no content will come out from those. Are there any no-goes? I remember a few years ago, the PDF's of scanned readings always needed to be converted to text base. Are there any tips that would be useful? PDF, yea or nay? Kiah?

KIAH: So I was actually going to try to answer the question beforehand, but in my case absolute nay, I loathe PDFs. I find them difficult to navigate. Quite often, you'll come across ones that aren't tagged. I personally hate PDFs. Some other blind people don't mind them. Similar to a lot of other questions we've answered before, it really depends on the person, but I would like to touch on a combination of this question and the last question regarding PowerPoints.

Things to avoid is to not use Prezi, it is completely unaccessible. I have had lecturers use it and it is not usable at all with screen readers.

DARREN: Visually, it converts the text to graphic so it makes it worse.

DOUG: If I could answer the bit with regards to conversion to text. There are some good optical character recognition programs which will convert pictures of text into text, but they are not foolproof and I'll give you an example. If you are reading a long report and you are looking for the conclusion, you might do a Word search for the word "conclusion" and it has recognised the "I" as a "1", you won't find the word “conclusion”. That's where OCR isn't foolproof, so that's where it is best to get the original text‑based document or have the document go through your institution’s transcription service. OCR by the student or staff member is a good temporary interim situation, but it is not foolproof, certainly not when it comes to academic materials when you are doing page referencing and ...

DARREN: I think Doug has been hit by a wave at the beach. Quickly, Andrew, with the time constraint. PDF, yea or nay?

ANDREW: I have a love/hate relationship with them. If they are done well, they are very usable, but most aren't done well and that's a real frustration. I could spend an hour giving you a rundown on PDFs.

DARREN: A quick tip with that is most people create PDFs from Microsoft Office from a Word document, so put both up.

ANDREW: If you create from Microsoft Word and it is a properly constructed Word document then you'll get a good PDF. There are a few caveats, but by and large, that would work very nicely, as you have access to the bookmarks, which is a great navigation facility for that sort of stuff. People should not be distributing scanned images on PDFs, that shouldn't be happening in tertiary education at all, but they still do.

DARREN: I do realise there are more questions, but we'll give them out to the panelists and put them up on the website. Today's presentation will be going up on the website, we’ll also be giving the transcript and thank you to Mel, our captioner for today, we'll get the transcript of this and we'll follow‑up with all the questions we didn't get to. Thank you to the panelists, thank you, Andrew, Kiah and Doug, for your time today and your insights and your experience into this. I know we did only scratch the surface of screen readers, et cetera, but I do hope this was useful for people. Sometimes, we just need a bit of a 101 and a bit of a reality check. The technology, as amazing as it is, and it has jumped forward in leaps and bounds, it has its own issues and the key message and takeaway from that, every user is different, everyone's skill level is different and the same with academic staff as well, so support each other. The peer support is fantastic and it also is with academics as well. So if you can help someone out, help make something more screen reader friendly, then please do. Thank you, everybody. Any last words from the panelists?

ANDREW: Thanks very much for listening and I hope everyone found it useful.

DARREN: Kiah?

KIAH: Apologies, I have had Voiceover reading out all the comments that have been coming in, so I completely missed everything that's been said.

DARREN: I was just saying thank you, Kiah, any last words from you?

KIAH: No, yeah, just thank you. I really enjoyed being part of this. So apologies, I am hearing two different things at the same time. It is a sensory nightmare.

DARREN: One of the many questions we didn't get to, we had hundreds, and one of them is screen readers reading out the chat, so every time somebody puts something in the chat box, it reads it out. Doug, you haven't been drowned by a wave?

DOUG: Just ask questions if you are unsure of other users, whether it be students, ring up Vision Australia, ring up Disability, talk to other people if you’re unsure, use the Aust-Ed list, use your email lists, just ask questions is the best thing.

DARREN: Thank you, everybody, and thank you, ADCET, for hosting today. I hope everybody got some useful information out of it. Thank you, one and all.

DOUG: There is a survey, Darren.

DARREN: Sorry, and the survey. It is in the chat there and it will be going out to everybody. If they can go and fill out the survey, please. We'll seek to answer the rest of these answers and get these up onto the ADCET website and get them out to everybody, but thank you all for joining us today.