**Annie Mannion:** Hello everyone. And welcome to today's webinar. It's just gone one o'clock. So I'm just going to give everyone a chance to join. There are lots of people registered for today is it's a very popular topic. If you joined online, do you feel free to drop into the Q and a box and say, hi, we've disabled.

The chat feature. As we've discovered, it can cause problems for some people using screen meters.

Hello? Hello, Kiona, Gretchen from Oklahoma, Janet

**Dafydd Henke-Reed:** As a Welsh person, someone has commented from gorgeous sunny Wales and having grown up in south Wales. I'm not sure what that sunny is. The word I would use for my for my hometown, but maybe different parts of Wales.

**Annie Mannion:** Okay. I can see lots more of you have joined just a couple more moments.

**Dafydd Henke-Reed:** You can't detect sarcasm with people's comments where they've said hello from Milton came city of dreams. I don't know if that's sarcasm or if that's, it is the city of dream. I've never been. I only know that Milton Keynes isn't it. When the only towns in the cities, in the UK that has flows to the grid system like they have in America, but.

**Annie Mannion:** Yeah. I've only been once. I didn't pay all that much attention,

Okay. I can see lots more people are joined now. So I'm going to start the webinar. So hello everyone. And welcome to top tips for dyslexia and technology as part of the sexier week 2021. My name is Annie and I'm digital marketing manager. And I'll be running you through what you can expect from today's session.

 If you could move on to the next slide, David. So just to go through a few bits of housekeeping live captions are on the webinar, provided by Kimberly at my cortex. So thank you, Kimberly. You can turn them on using the CC option on the control panel and there are also additional live captions via stream, text.net forward slash player question mark event equals ability net and slides are available at slideshare.net/Abilitynet

And then also on our websites abilitynet.org.uk /dyslexia- tech. If you have any technical issues and you need to leave early, don't worry. You'll receive an email with the recording, the transcript and the slides. And then depending on how you joined the webinar, you'll find the Q and a window and see lots of beauty half.

 And if you want to ask Dafydd any questions do drop those in the Q and a area for us to address after today's session. We'll do that in a follow up blog on our website, and then we also have a feedback page that you'll be directed to at the end which invites you to tell us about any future topics you'd like us to cover in our webinars.

So please do share your feedback. So that's it for me. So now over to Dafydd to present, today's webinar.

**Dafydd Henke-Reed:** Awesome. Fantastic. Thank you very much. So just to introduce myself, so my name is Dafydd. It is Welsh. Going back to the conversation about how sunny south Wales is for David. I'm the head of accessibility at AbilityNet.

Now we'll have very kind of complex nature of what I do can really be boiled down to. I spend a lot of my time complaining about websites for a living and materially, how inaccessible they are, which can be understood to various means EG whether or not it passes and fails wikag or whether or not it doesn't meet certain expectations from a usability point of view.

Now that all being said, what I'm coming to you today is the fact that I have dyslexia. And what I'm going to be talking about today is Mike kind of experiences, as well as tips specifically with how to make sure that the kind of the digital landscape is more or less accessible to folks such as myself with disliked.

Now I do want to throw up in a caveat and I really feel the need to do this in a way that I don't potentially with more kind of black and white areas of accessibility, where what I'm talking about to say are very personal and idiosyncratic experiences. It is what this lecture is like for me and just me.

And so the thing that I need to be mindful of is making sure that folks are not going to attend today's session. I think that day with folk, he taught me exactly what this lecture is for everyone. Because the thing to stress when we are talking about newer diversity, diversity is the keyword. And I w I don't want you to do is kind of, really kind of based your output.

So everything that you do necessarily on me saying this is exactly how it is for. These pictures that I've got on these slides or have two paintings of cats, and I'm going to be impolite to the person that painted these cats and say that they are not the best representations of cats that there have been.

And the analogy I'd make is that it's almost as if whoever painted these pictures of cats potentially had never seen a cat before and potentially just based their interpretation of the cat based on maybe what they'd heard about cats. So yeah, so hopefully people will get value added today, but please don't take it as a kind of black and white.

This is exactly what this lecture is like for all individuals.

In terms of what dyslexia isn't. So the first thing that I always stress to folks, because it's always the first thing people say to me, if they'll say, ah, it must be like that the words are constantly jumping around. And an example here is an article from CNN that says, this is what we're doing is like, if you have dyslexia now I do know folks that will say that they kind of experience not tremors, not quite the right word, who kind of experience something where they're kind of, their eyes will kind of Twitch and the words, or seem to move from their struggle to kind of keep it in as your focus.

But I've not generally heard of the kind of extreme of it's like a tripping on acid that it's really like, everything is constantly in this Whirlpool of words. It's constantly moving around. Again. There might be folks out that they have that experience each just not something that I've experienced. And it's not something that some of my peers have experienced.

And it's a more of a subtle effect where things that you might come across, like the CNN article of potentially more about emulating the outcome as opposed to emulating the experience. So what I will be talking about are some of the challenges that I have associated with. And the more, pretty subtle manifestations and things like this air quotes to select your simulation of potentially more so about how you can experience that same thing about having this kind of cognitive challenge with interpreting what you're reading.

But that's not to say necessarily that that's literally experienced for me. Again, just want to throw out some asterix before we really get our teeth stuck in some of the stuff now taking more so be on the page. Okay. As I've already mentioned, it's really broad, which is why I kind of wanted to stress that there is no one size fits all for this, but in broad terms, I can use some of the things that the British dyslexia association signposts were very some effect on spelling.

There's difficulty with things like phonological awareness. Now that for me, that's a big one for me. When you, for example, have a very young child that often there seems to be a understanding of this overlap between the phonological sounds. We make how we write, how we speak and this and that. There's this kind of, that it all kind of sits well together so that we say, huh, hello and good.

But I, and there are certain noises that we make and that how affects then how we write and that there was never something that made sense to me, the overlap between how I write and how I speak just does not seem to exist. Verbal memory, again, a really, really big one for me, where it's less about my literal ability to read or to speak, but it's more for this kind of working memory where if you think about it, when you're reading and writing, especially you kind of have multiple things going on in your head, you, for example have, well, that's the thing that I've just read.

That's the context with which I'm reading, the current thing that I'm reading in. The thing that I'm reading, there are several call-outs to potentially past events. There's a word there that has a, that is an unusual word, but I know the definition of that word and this sentence is kind of building up something that's going to come in the next sentence in the next clause.

So there's potentially multiple different things going on at once. And one of the big thing. Is the challenge associated with spinning all of those plates where I can deal with one thing individually and what I'm dealing with. A lot of things concurrently, that's where the challenge comes in. And lastly, with processing speed, from the point of view of, again, if we're going through a book and we're doing all of those things at once a very fast clip, the challenge for me is this kind of stopping, stopping, and starting where my challenge is potentially with the phonological awareness, with this kind of verbal memory, with the challenge of the spinning, all these plates, that then has a halting effect, where, for example, I'm reading the sentence I'm going really well.

Or you then come across a word I don't recognize and where you might think, oh, I don't recognize that word. I'm going to hold that in my brain for a second. And I'm going to check the definition. I will look it up. Oh yes, no idea. To remember the definition of that. And now I'm back in the room. That's more so a challenge for me where it then kind of has a halting effect as it impacts my efficiency of getting through.

They also be kind of current difficulties. So these are challenges that I would say aren't necessarily what I might consider to be core factors of dyslexia, again for me. But it's potentially more so that different folks have where things like motor coordination. So, you know, just planned eye coordination, writing things can be challenging.

 Mental calculation, again, coming back to this spinning multiple plates. One of the ways my dyslexia was originally was originally diagnosed, was off the back of I can do things at a kind of a perfectly reasonable level. It's just, as soon as I'm dealing with multiple current things all at once, I seem to disproportionately struggle.

And so it's less that I can't do melt mental maths. And I don't, I wasn't, for example, diagnosed with discount, this calculus, but the, all of these things can have these kinds of outcomes. And lastly with concentration again, folks will often say to me, seems like you're not concentrating, or I'm speaking to you and you don't seem to focusing on X, Y, and Z.

And again, it comes back to this spinning of plates where if something is suddenly comes a curve ball, I've nowhere has this potential holding effect on my concentration. Again, these are the things that are kind of derived from the British dyslexia association. That was a really broad, right. This comes back into kind of a sense of not necessarily I, I, cause I I'm keen not to be too overly medical, but those are more so the things where we kind of think about what are some of the experiences we might consider at a high level, I want to briefly touch on, well, what are some of the really practical experiences for me or very practically for me, it's that there is this my brain cognitively struggling with inflammation in the eyes.

 And it's not for example that I cannot read a page in a book. It's not that I literally cannot read a website. It's again, for me, at least not the word jumping around. It's not necessarily. The concept. It's just there some strange neurological processing where my brain will struggle. An example of this is I might write a sentence where I've used the exact same word three times.

So I will say something like today, I went shopping, shopping, shopping at Tesco's. Now I can read that sentence 22. And there is nothing wrong with my eyes. Visual ability to perceive that I've said that three times, there's nothing wrong with my brain's capacity to understand that, you know, it needs to be, I went shopping at Tesco's.

It's just, there's some strange cross wire where my brain just does not interpret that. That is what my. Because my eyes or my brain tells me the thing that's written there is just, I went shopping at Tesco's it's simply just doesn't pick up that information as I've already alluded to kind of limited short-term memory and digit span.

So the main challenge for me is just this difficulty where I can only spend so many plates at once. So, and I really need to apply a very conscious effort to that short term memory processing. Again, you're reading through something complicated. You potentially have not thought about it. You've plenty not thought of yourselves as kind of active readers or active listeners, because I got the same thing in a kind of doable conversation where you're actually keeping hold of multiple things at once.

What someone's just said, what they, you think that are about to say how you think you need to react to what they're about to say what they've said that maybe relates to past events. Yeah, there's lots and lots of plates that get involved and I just kind of have this challenge. I struggle with lots and lots and lots and lots of different points and struggled to potentially keep that within what I, you know, the, the, within the holding cell of my short-term memory.

Again, it's not going to word blindness. It's not the word stance. It's just a seems to be this kind of holding effect that goes on in my head again for me individually. Ooh, sorry. I'm asking us to spit back. There we go. Folks will often say in terms of, okay, cool. What are some of the things that have benefited you?

What have some of the ways in which you've overcome some of the stuff? Well, I hate to say it and I appreciate that. People potentially don't like to be reminded of their school days, but for a lot of folks such as myself, the very first home that dyslexia becomes a thing is in, is in an educational setting in as much as that's often where the first signposting is.

So someone might mark an essay you've done and it's that high of a can no sex. Y and Z, I might feel you on someone potentially work these days again, because I'm an old man. Historically, a lot of this stuff was in an educational setting. Now the outcome of it was 25 cent extra time. Now the The challenges I'd say associated with that is it helps.

Yeah. Suddenly I got that kind of processing time because it was less that it was less about my intellectual ability to do X, Y, and Z. But as I mentioned on the last slide, a lot of it came to this short term memory challenge. It was spinning lots and lots of different plates all at once those struggled with.

And so that extra time was more so focused on kind of using that time to kind of free up myself, kind of mentally for that space. But materially, I was still responsible for self. It's also not fun to spend 25% more time in an exam setting. And it also potentially has a lessening of self achievement. So it kind of promotes this imposter syndrome of well, am I only here?

Am I only here for example, at this university or within this job off the back of potential accomplishments within the university, because I got extra time and I am wondering, as I mentioned educational settings again, it's partly because that's where a lot of initial diagnosis come from folks, but also where initial support comes with.

But the kind of same things can be talked about within a workplace where if, for example, someone in a workplace says, oh, I've slack, FYI. And their response was simply, okay, cool. You get 25% extra time to complete a task. It's potentially falling foul of some of the same challenges are the responsibility on the individual to kind of lead through it with more time, which again, potentially isn't fun and potentially has this imposter syndrome.

Now, one things I will say is that technology has been a huge boon for me. So I've got two videos on my screen. Let me see if I can, well, no, it's telling me pause them that PowerPoint sometimes does not want me to pause videos. My apologies. If they are distracting. But that's kind of the first four part of technology I talk about is writing support.

So people will often potentially poof, poof auto-correct, but it has been a huge win for me. So in the videos, all I'm using is iOS is native auto predict where I'm typing in some texts, and then I'm selecting the text from a kind of snack bar of options. I think this is what you want. And it allows me to get through sentences and kind of double triple time, because I'm not making little mistakes and the handler back and correct them.

And it's reducing this cognitive load. As I alluded to this idea of the challenge, we have spinning lots of plates. Well, if I can take down one of those plates and say, okay, I'm not going to think about how I exactly spell that word. And I can say what I can keep in my head is the thing that I've just said, everything I'm about to say, and I can worry less about, oh, is it that I, before that he would that one and just use the predict.

Now that gets me out of jail free. And a lot of cases, I do also use things like global auto-correct. People might also come off Grammarly. You can kind of think of these things as to the kind of next level up from inbuilt prediction that I will say is getting much, much better. I do personally iOS more than anything else cause I could get them built some good.

 But there's also third-party software kind of like randomly like like global as crack, like rambly where if you're in any system ecosystem where you can potentially use that software to kind of get the term, you can kind of use this kind of auto prediction. And the, also one of the things that are safe, getting much better these days is how these softwares can learn your own habits.

So iOS wandering is, as I like it is that the predictions, how starting to realize the things that I do wrong and the mistakes I make and the sentences that I like to form such that I can just get a lot of stuff for free, similarly global auto, correct. It can tell me, I can bring up a menu that will say FYI, you've spelled this word wrong a thousand times.

So I know as soon as you start on this one, I'm just going to tweak it and I'm just going to put in the right spelling. So there's software out there and kind of learn kind of learn your own personal foibles. Now there's also speech to text, and this is an interesting one, but often folks don't think about because they assume, well, you know, historically it was just writing historically it was twenty-five sex or cents to spend more time, paper and pen.

I'm writing things up, but obviously now, like we use technology in a way where literally writing papers is not really as relevant as it was 10, 20, 30 years ago. And so I spend probably about 50% of my time and it is context sensitive depending on whether it's private communication or something that I'm happy to kind of say out loud dictating.

So for example, I use dragon historically I've used dragon naturally speaking, I'm using Siri and Alexa office dictate a macro S an IRS dictation. Again, I'm personally more so in the iOS ecosystem these days where. I could stumble for quite a while thinking, how am I going to spell this? Ah, how is it the F E and what's the right Qur'an for XYZ, or I can just speak it out loud.

Now I personally find it a lot easier. Cause you might be able to tell Jim during this webinar speaking a lot of this stuff out loud. And so I can just dictate and the, some of those plates are again removed the how exactly do you spell it? How should X, Y, and Z just gets taken out of my hands? And so I can more so focus on materially, what I want to say and the technology handle some of that information for me.

And again, the big thing for me is just speed and efficiency. And so how quickly can I do the task and how how efficiently can I complete the task without making mistakes? And just audio dictating allows me to do it more quickly with less mistakes. Now, the other side of the coin for this one, Is also text to speech because again, elementary earlier it's input and output.

So I can read some I, sorry. I can try and write something down and stroke with certain parts that I've already alluded to, but then I also need to get some information back, right? It's not just about me composing information. It's about me consuming information. Now, one of the main ways I'll do that or this video will let me play it.

 You may have like audio where I can, for example, slack, I can say, Hey, I want this text to be spoken to me. I can then.

Now what that then allows me to do is get that same information, get rid of some of those plates of, oh, what's that word, struggling with this neural processing where it's almost, it's just like someone speaking to me where instead I'm not interacting with my challenges associated with how do I pause that?

Oh, that's spelling is slightly different. That's not spelled phonetically. That's one of those strange English language rules where actually it's spelled X, Y, and Z. And I can say, Hey machine, just say this to me. And so what you might notice that it becomes more of a conversation that I'm having technology, as opposed to the arguably more old school kind of method of now having just a digital equivalent of paper and pen.

Yeah. Well, I struggle with writing. I struggled to read my writing struggle with typing for the exact same reasons. Not because. I'm struggling with ambulation for fingers, but again, those kind of short-term memory that's processing challenges. And so I'm making it more into a conversation with my technology, or I'm speaking to my technology.

I might technology speak to me back. And historically I, you read and write on windows or Clara, speak on windows or office speak. So if you have access to the office 365 ecosystem, Microsoft more and more are putting this stuff in, built into that software plan. Personally, I'm spending a lot of my time with some of the stuff that's inbuilt with macro essence, iOS, Jessica personal preference.

It works really well for me. Now, the other thing that's worth mentioning is that there has been a communication shift in, in with modern technology that I would say has enabled me beyond my wildest initially. That is March as B. So we can communicate with things like emojis, reactions, stickers, animations, like gifts, videos.

We have Skype, FaceTime. I can have some extras here that have kind of popped up through lockdown teams, zoom, slack, et cetera, or audio based media, some more. So things like kind of being on a discord. I'm also like pictures like Snapchat, how often these days are we communicating where we'll just say, oh, I'm just gonna send a picture of this thing.

You know, I could type out a lengthy essay or I could just send a picture of the thing. Now I do need quite an asterix here. This is not to say, to rely on these forms of communication. So in as much as different user groups within the within the realm of accessibility are going to have kind of different access needs myself.

I absolutely love if, for example, a sentence can be contextualized with an emoji. That really helps me because I can go from understand from struggling with context and intent. And again, that's another one of those plates. If I'm reading a sentence, understanding the word, understanding the definition, understanding things like callbacks references to other things and working out the context.

Well, some of those things are taken care of for me, or potentially supported by something else, EG and emoji EG a picture. Well, that really helps. That's one less thing that kind of reduce that cognitive load. How. To go with the example of, let's say you've got some texts and a picture, and the picture really contextualizes the text.

In that example, you'd want to make sure that that text had alternative texts, such that someone accessing that page with a screen meter would be able to access that same information, data, and emoji. You would not want access to that emoji to be the, be all and end all of understanding that information in as much as again, different assist technologies might not communicate what you think they'll communicate with that emoji.

 So again, it's, it's about saying that this has been a huge boon for me and applied sensibly and moderately the things like things like icons, emojis, animations, videos, or audio pictures, they can really help. And they really helped me, but making sure that it's not full, but making sure that you don't forget the other accessibility considerations of these forms of communication.

And just to give an example. So you started, you've used a Facebook messenger quite a lot. And if we think about it, well, we can say walk. Sure. There's audio call through a path. So there's audio calls, there's video collections. They're sending pictures, there's some video clips, there's an audio clips.

 There's just calling someone up or independently of that, just sending someone your voice or saying, oh, I'll be there in five minutes. And you know, if he will think about it, like how many of us penny sometimes just go, oh, I can't type this up. I'm going to send them an audio message. I'll be there in two minutes.

And how many people, for example, in a group chat that has that one person that just really always loves to do that. Just always have to say, Hey, yeah, I'll be there in two minutes. You can send your. So instead of, for example, me struggling to say, okay, I'm here with this postcode or how do I spell?

Aberystwyth like, oh, I can just press a button that just puts a pin on a map that just says, Hey, beep here's exactly where you are. And again, it's just removing those additional challenges. Send stickers, gifs, emojis, again, asterix were things like gifs and emojis that you want to make sure that you're still communicating in a way that's accessible, but you can use multi media, multimodal forms communication to, again, it can reduce the cognitive load.

Now I will also talk about some of the challenges that are more associated with what you might consider to be kind of bread and butter content. So big ones to me is unstructured texts, unstructured information. So where things have no headings where things have no lists images of text. And I'll explain why that's a potential challenge in a moment in as much as I want to access that text, but might not be able to access it if it's kind of encoded within an image, but a bit more on that in a moment.

Things like hominins and homophones. So fair is fair. Pair of powers. The reason again, I individually find them challenging. Is that again, it just adds to this cognitive load where you can imagine that reading is similar to kind of running, you're spinning plates, you're running along and you come across hurdles, you come across.

Okay, cool. I think I know the definition of that word and Ooh, I don't know the definition that word, but I think I've understood it through the surrounding context. Cool. And you're all the same dunes and stuff like theorists there where you go, Ooh, that's an initial hurdle. What does that mean? Oh yeah, that's a homonym.

Well, that's a homophobe where the words that I've been put in a way where you can kind of easily imagine they're just trips focused. Abstract or overly verbose language. Again, this is not to say that everything that you, for example, publish on the web needs to be completely devoid of any language that could be a tool considered.

 For example, technical, because you might work in an industry that are, let's say legally bound to include certain phrases. You know, you might, maybe you've taken on, he might work in a legal sector where, you know, you have to talk about things in a very specific way. But outside of that, there's kind of confines making sure that you don't have overly abstract.

So you are kind of direct and matter of fact, and avoid overly for both language when you can be concise. So again, this is not me. This is not me saying that folks who do have restrictions, EGM, EG, and illegal sex. So but me saying that, you know, if you don't have those four sectors, do what you can within that.

And also no turn his, or kind of text input or output. So an example of that would be something like if, for example, I'm asked to input my sorry, I've lost train of thought for a second. If, for example, I'm required to give my shipping details. Well, I can put those in, I can type that in and then it says to me, Hey, we need it again, because let's say for example because let's say for example, I need to give my shipping address and then asks me again.

So I'll just confirm can you just give it again? We need to make sure it matches X, Y, and Z. As opposed to there being an alternative there being a little tick box that says something like, oh no, no, this shipping address is the exact same that I used my previous order or classically. If it says, I'll watch your billing address again, the alternative there is all tick box that says, no, this is the exact.

 Ditto. And this is again, going back to the idea of making sure that what we're doing is accessible in broad terms. I'm someone who hates making calls. For example, who has little D or big D deaf, they might say, Hey, just give me an email address, please, [can’t transcribe]. Give me a where are you to chat via text with a agent?

And that is something that will be such a huge accessibility consideration for them. But at the same time, someone like myself might say, oh, I'm Roy. And I struggled to chat with the agent through text. I'm going to make so many mistakes. It's going to be way easier for me to potentially pick up the phone.

And so, again, it's one of those things, like making sure that their alternative means of communicating with. And also more generally with your content. So if, for example, you know, you just have a table as opposed to a table and a graph. One of them is requiring that I kind of try to understand EG a table versus the graph that potentially is gonna be more accessible to me in as much as I'm gonna have a better experience with more visual, medium.

Now to give an example of what some of this stuff looks like a writ large, an example I would give is with the Lloyd's banking app. And I can, I can name, drop them because as a, as we'll find out, they have fixed this issue. So historically, when I was trying to log into my bank account, my banking app specifically, and I prefer using apps, generally unpick and smaller cognitive load, they usually a lot more focused on a very specific tasks, generally avoid desktop versions of websites.

Cause it's just an order of magnitude, more complicated, more cognitive load, more plates to spin, logging into the banking app. And I think to myself, well, I don't know my user ID. I, I don't remember. And if I try and type it, I'm going to make mistakes and that's fine. I'll jump back over to last pass. I'll copy it.

My username to my clipboard and I'll paste it into that field and the app goes, that's fine. Cool. I needed to know the information. You've got it stored in a secure vault. That's fine. What's your password, please. I do the same thing. I go, well, I don't know my password. I don't know any of my passwords and I, you know, didn't want to give it a really insecure password.

Like, you know, my name one-on-one exclamation mark. And so again, I'll go back to my vault. That's protected through face ID and I'll call me my password to my clipboard and I'll come back to the app and then will go, ah, unfortunately you left the app and because you left the app, you need to go all the way back to step one.

In this in this process because you, you left the app and that's a security breach trust. So you need to make sure that you complete this flow without heavily giving the app. Now, how could I do that? Well, materially, I had to do it by writing down my username. I'm writing down my password. So what was a security consideration because of my dyslexia resulted in a security risk, because fundamentally it didn't allow me to copy and paste information into the fields vis-a-vis, which would involve me briefly just minimizing the app for 30 seconds.

Now the solution to this problem was introduced. Such that I could access my bound full wealth. I wasn't, you can think of it as not necessarily being a big change, but it went from, we need your username. We need your password. We need this across multiple screens and we need you to never leave the app in order to do that versus, Hey, just use your fingerprint.

And that first instance, in order to set it up, I still needed to kind of write down a post that's my password to that initial one to get through initially in order to set it up. But then I could do that once I experienced that again, that challenge experience then enable touch ID shred all done.

And so it goes from a very inaccessible experience to actually what's a really accessible experience for me. And it was all about reducing that cognitive load now in terms of what you can do again, the main thing I say is just be succinct, be simple, do not worry too much about being. Over-complicating information and just stress, the very subsequent you want to make.

Now I'd also say to section your content. So again, you, you can have something that is very simple and succinct, and then the next thing you want to do is making sure that you're then breaking up into logical chunks. Because the number one thing that I struggle with, if I see just a wall of information, I'll look at it and my brain will just go, Nope, ain't no way I'm going to be able to do that.

And that's kind of what I'll think about abandoning ship using semantics. And again, this is the one nice I'd kind of come back to a little bit. With double images of text is use semantics for your headings, for your lists. As there is an added benefit with compatibility with read reviews, not show that.

As well as providing side by side alternatives for information, I already alluded to this with what some of my challenges with copier and a big one is, is when there's no alternative mechanism to understand information. So for example, the only way to understand so information's presented is, you know, it is a graph and there's no table or there's a table and there's no graph.

 There are a recipe and there is a video during that recipe, but then there's not the recipe in text or the exact same thing in reverse where there's potentially a recipe with a bunch of instructions to follow. And I have plenty with them really struggle with some of the individual, maybe the language use some of the guidance in it.

 And so I said, okay, cool. Let me just, let me just watch the video because then it will make a lot more sense to me. Now, what I would do is I'm going to quickly just jump out of this deck. I'm just gonna bring this over here for a moment, just to show you what I mean when I've alluded to things like images of text and when I've alluded to semantics, because one of the questions I often get asked, just say, well, hang on structural semantics.

That's like scream meters, right? Yes, absolutely. You know, you, for example, want a, heading to be a heading, such that a tool such as a screen meter would be able to communicate, Hey pumpkin farmer started one pack of seeds heading level one, and folks might say, oh, well that isn't that more so for a voice activation software.

So for example, you can give your command or you can give you a laptop, the command press, press search, and it will be able to press search for you. I'm using isn't really in that ballpark, I alluded to using things like dragon brigade was more so that I could highlight texts and get it read out to me.

Now, one things that I will use when I do use desktop is things like read a view. So if I I'm in Firefox on them, I can spend, why don't you use Firefox? And again, I alluded to the fact that I really like apps, cause there are a lot more simple one. The reasons I will use things like read a view is I can go from a, something that's very, very cluttered with a whole lot of information I don't materially need.

And it can kind of strip that out and just give me the bare bones of what I'm looking for. So in this instance, I'm saying, Hey, bring out all the other ancillary content and just give me this article. And this is where things like semantics can come into play in as much as I've just got some few more examples.

So I've got an example here from. From the technology section about windows 11. And if I scroll through, we've kind of observed that there are these subheadings. So in this instance, there is a heading level two. If I actually read a view, we can see that this kind of structure seems to have been adhered to where it's got the text.

It has the headings, it has the pictures, or it seems to be missing some lists. That's okay. But what I can do, if I go back into this, I go to a new era and all I'm going to do on this page is I'm going to remove this heading and I'm going to set it to be a span instead. So it's got the same class associated with it, but it's not heading in the same way.

Even visually nothing has changed, but how could it and read review? There we go. And this is where we need to be mindful with using semantics Catholic. And this is quite kind of simple example. What this review is doing is it is kind of trying to say cope. I don't think they need this information. I don't think they need that information.

I'm going to try and pull out the information that's in the main content. Well, how does it know what's in the main content or because the developers put my information within, within for example, main tax and it's making assumptions about, for example, the structure information EEG, which are the headings or what are not some of the headings.

And again, one of the ways that it's doing that is that it's saying, Hey is it is using some of the semantic information so we can see the difference. For example, between pressed up is a heading here, a new area, which isn't, which just seems to be falling in just seems to be new line cancers. The other thing with images of texts is what I can do is I'm going to press listen, and I'm going to access some text to speech.

And again, this is not a screen reader per se, because what I'm using, I'm still using a visual gooey. So this isn't something where I'm controlling my entire system with my keyboard, with swiping gestures. This is something where I'm still physically observing the screen, and I'm just using a menu to say, Hey, can you read some stuff to me?

If I press play,

stay clean.

Not going to go through the entire thing. Assuming you kind of get the brief gist of this. Again, my personal use case for this is less so about navigating through an entire ah, sorry, lost train of thought. Is less so about me navigating through the entire screen like this and more so about where things are just really confusing me.

So again, what I'll generally do again, where possible I will use a native app, much more simple, much more streamlined user experience when I can't and on use two, you need to use a desktop example or more so than be using reader view my personal view. I hate to say it could I, and otherwise in IRS and apples camp, I do like Firefox's read review.

I think it's a bit more advanced and I will use this text. When I come across things that have that halting effect. So again, I'll be reading through the page, ideally because of the semantics that will be used. So if I'm going to refresh this page, actually to get rid of some of the weird adjustments I've made, there we go.

So that's now heading again. Hopefully it's been structured in a way that that's nice and logical. And then if I come across something where I'm like, Ooh, I'm stuck on that. That's more so going to be what I'm going to highlight that information. And so

 More so they're going to drill down on Rudy specific bits of content. So again, I'm not going to ask it again. This is personal. I'm not going to ask it to read out an entire page, but I'm more so going to drill down on two very individual parts. I can see something in the QA set. I was referred to someone that came to to workplace about how to use a dragon how to use it struggles.

They are one of the reasons I don't personally use dragon. There are a lot of folks gone, very, very well dragon is I find personally some of the inbuilt stuff that's inbuilt, it's far in built to the IRS and more so being built into windows natively is a bit more useful for my case where I more so want to kind of strip out some extra information, eat, you'd read a view and more so just what I individually get the little bits and pieces here and there to jump back to my slides.

I need to minimize this one second.

Ooh, I'm not sharing systems. My apologies, what I can do is so it's not the most exciting thing in the world, but I can share it on just so people get a flavor of what it's like. So if I go to listen again, don't worry too much about the speed. I know it's super slow, but real quickly, don't worry too much about the voice.

 I've just got it set to develop. If I just press play. I see co UK windows 11 launches with re-designed start menu. My David Meloy five, six minutes by David Malloy technology reporter. So it works in a very similar way that you you'd experienced if using a screen reader. The big difference is that I am I'm interacting with the visual gooey, but you can kind of get the sense that the, the synthesized speech is the same core principle.

 My apologies. I didn't realize that I, that I wasn't sharing systems. To jump back to my slides. So already mentioned, so kind of being succinct, being simple, using semantics, we've already alluded to the idea of using semantics in such a way that they are, again, they're not, I don't wanna say they're not as important that's because it's more night and day when you're using a screener where you need to care about the scientists with every little thing, my personal experience with this lecturers, it's more structural semantics that are kind of a core thing.

Either your headings, your lists, your tables because then it adds that extra level of compatibility and side-by-side alternatives now in terms of what. 40 liters, this provide alternatives. So one of the kinds of best experiences I had the other day was something where I said, Hey, can you kind of fill out your address?

And I just gave my postcode and said, okay, cool. Here are the rest is on this postcode and a little drop down, reduce the amount of typing in other instances. It's for example, when I've even strolled site something out, it said, well, you know, we can detect your location for you to want to do that.

Press that button absolutely works. Fine. Determine the other example I provided is that just dropping a pin on a map. So if it's something like, oh, well, where do you want to pick up this delivery delivery that's coming to you? And this is your vague area. I can really struggle to type out some really kind of arcane names of London street names, or I can just go.

Right there, please. And again, it's just about having the alternative ways to get access to the same information. Big one is multiple forms of authentication. I will always kind of stress the authentication is going to be incredibly important because it's the front door. And if you can't get in the front door, it's just something I'm going to walk away from such that if, for example, I can access things like touch ID, face ID, and it's something where I'm going to be using that app regularly.

I'm probably not going to use it. I'm probably just going to find out the breaker's going to find a competitor that does give me access to in this case, biometrics, avoiding custom keyboards. Now this is more so if you're making apps, so generally you wouldn't have a you wouldn't as kind of content creators on a website, you wouldn't be making on keyboards, but let's say you work at an organization at a university, for example, and you've got a student union app as an example, or an app where people can track the courses.

Custom keyboards can be a big, big challenge. In as much as if I go back a few slides, I potentially would not be able to access the automatic corrections. I'm potentially not going to be access. The dictation technology and you are potentially not. I punchy, it's going to be a very big challenge for you to replicate what comes for free with some native vanilla keyboard.

The only example I think that's once or twice on the web are more so where it's like, Hey, you can't use your keyboard to type in X, Y, and Z. You need to use this on-screen virtual custom keyboard providing for you. And it will be the same feedback where that would introduce quite a lot of cognitive challenges versus.

Being me being able to use my own air quotes keyboard, where a lot of the time, even if I'm using my math book, I'll be giving kind of a voice stick patient to my machine. Also last, just making sure that we're supporting kind of autocomplete functionality. So one of the big challenges again is with authentication and one of the big updates, for example, that we saw with WCAG in WCAG 2.0 2.1 was requiring that auto-complete values be used on form fields that are collecting information about end users.

And this is something. So if, for example, you have a website that is either collecting information. That could be that name that address. There are that titles are Mr. Ms. Doctor, et cetera or even things like. Then you should be using the auto value such that that user similar, for example, with Lloyds can set that information once on their browser.

So they can, for example, so, so they can say something like, ah, I'm just going to go into my browser, EEG own apple ID and say, this is my name. This is my address, blah, blah, blah, blah, blah. And then when they get onto a website, that that information is just automatically provided. So if I just jump really quick and I'm going to jump back over to my Ooh, interesting.

So I, my browser seems to have disappeared in ether. There we go. And what I'm going to do is I'm going to bring over the spot. I'm just going to type in, I don't find input purpose, just to give you a flavor of some of the some of the. And I need to go here, I believe. And then I shut down. There we go. So in as much as a lot of websites will provide the same information again and again. So it will very commonly say, what's your name please? You might come across some, some phrases seem unfamiliar to you. So, wikag and the H no specification talks about things like on a prefix again, Mr.

Ms. Et cetera. Additional name middle lanes, for example. Versus things as, as things like usernames your address, your postcode, a credit card information, your birthday, your telephone number, email address. This is the sorts of information that gets requested from users kind of again and again. And so one of the things that you can do to really reduce the cognitive load is if you're working with developers or, you know, your websites asking for this information, making sure those attributes are supported.

So actually if you come across, I think if I come back a few times, if, as an example from here, Exactly in a form field like this, I could manly slip that and really struggle, or auto-complete, it's already set up with my browser and it just gets done and very, very similar to what you you'd see similar to the result that you'd get with biometrics, like with touch ID and face ID, I could see that she goes, asked what browser I've been using.

I can show it off to browsers. I've mentioned safari browser Firefox. So when I was showing off that review, that was Firefox

at that point, back to my slide.

 Also to make sure that when you are getting feedback, that you're getting feedback that is more than kind of your core target audience. So you will, if you, for example, you are trying to answer the question of what is this information as clear and precise as we really need it to be. If materially, you're asking a target audience throughout very ofeh with the terminology you're using the, are your kind of key target audience, then that's all then they're probably always going to feed back to.

Yep, absolutely. Makes sense to me. Versus when you're do getting that from. Ethan use it has to war informally. If you're kind of asking them the question of does this all make sense? You potentially just will be getting feedback that you simply would never realize otherwise, in as much as you'd be getting feedback that says, oh, I really don't know what this term means.

And you potentially would never have thought that because you've just been invested in that term for the last five years as an example. So making sure that you are procuring feedback that exists outside of their kind of real core niche, lastly is avoiding cognitive tests. Now this is very similar to something that I've just seen in the Q and a that kind of talks about data, privacy and security potentially.

 So encryption data, Where, where possible. You want to make sure that your authentication does not rely on cognitive tests. Now the broad way of defining this is making sure that you are not relying on the user really needing to kind of go away and apply a lot of cognitive load to a task that, that, that information is not necessary for.

So for example, a very simple thing is saying if you have to transcribe characters, as opposed to copying and pasting them, the example from that Lloyd's app was a cognitive test because it was saying to me, Hey, you need to remember this information. You need to get it from wherever. You've got it in. The banks of your brain are in last pass to then keep it in your head.

And then you need to transcribe it perfectly from your head down on, on to, into the app onto, onto paper. And that's a cognitive task. Similarly, if you kind of have as part of your login saying something like, you know, What's the square root of 3 million. Again, it's a cognitive test. Now this isn't to say that you can never have any cognitive test ever you, for example, you know, you might be university and what you might be talking about is a, an exam.

It might be something where, you know, the point of the exercise is that you are trying to get to the, trying to assess whether our students understand certain things. And so that's where I'm adding that asterix of cognitive tests that are not relevant to the exercise in question. The kind of caveating here is the folks might say, oh, we use captures a lot in a lot of times, captures will require, for example, users to answer a math question or work out kind of common and work out for example which one of these images is a bus as an example.

And that again is where there is that fine line between for example, the how robust are databases in terms of being protected from spam versus how many cognitive tests you have to get access to things, EEG to submit the contact us. And again, the thing I will stress is provide options. So if, for example I'm on your website and I'm not logged into your website and you've got a capture on your contact us form, because you say to me, look, now we'd love to have their cognitive tests, but we really need this capture.

And we know that it can, can introduce cognitive tests based on, you know, variables outside of your control. However, if you've got your app and you log into your app for your face ID, we won't give you that same capture because within that context, we know who you are. We know you're logged in and suddenly there's not that same context where we're really needing to protect ourselves from spam bots.

Again, that's not me saying that that's the ideal scenario, ideal scenarios that Colombia has put in existence. First place. What I am saying is try to be trying to do what you can, and if you come across things where you're thinking, oh, we are having to make hard decisions here, try to find different options again, avoiding customer queue.

It's going to be rare unless you're building apps. But also making sure that you support water complete. I think I've seen a few organizations that kind of have this battle between our legal, that say you can't do autocomplete and accessibility. That says again, within the context of wikag. And again, my personal experiences that will say actually authentically is a huge, huge value.

 And in many cases that is going to be a conversation that had an organization recruit user testers, procure feedback from outside of your core audience and have a style guide. For example, the British dyslexia association is probably my favorite. There's quite a few forums out there. That's more detailed than font choice.

Now, if I just open up this link really quickly and it's opened up on another window, my apologies. Give me a moment to drag it over.

Sorry. My machine is. Very strange day. I do not think that it likes that. I'm screen-sharing. There we go. So I tried over the bridge lecture example and some of the things that it kind of goes into a saying, well, sure do try and use a good font, for example, using sensors fonts in certain instances. And here's some examples, but also try to have a form that's kind of at least this big and try to make sure, I, for example, they use a nice letter spacing avoiding for example, underlining a types emphasis, avoiding that all caps using things like a headings and structure color.

So again, avoiding avoiding for example backgrounds that are really multi-colored, I've really kind of complex our patterns or kind of like for example, what you're scrolling through the page and the background is really changing from those different complex pictures. And again, it comes back to this idea of adding to the cognitive load.

If you've got a really simple, really neutral background versus something that's really complicated, like a really complicated pattern. And that's just going to be something that's going to take up my attention now, again, I'm not going to go through every single point here, but just to say that there is more that you can do with font choice.

And again, my, my personal one that I liked personally, like is going to be the pre-selection association that links in the slides. And very quickly, I will just mention you can sometimes think of it as being a, get out of jail free card to use a font family. That is kind of thought of as being the dyslexia friendly font.

 I do not want to step on toes and say, This one is amazing. This font is terrible big. Again, it is very idiosyncratic. What I will say is that some of the scientific research behind some of the fonts that I lauded as being the perfect deflecture font is not as good as it should be. It's not as robust and thorough as it should be.

And it is also potentially I say potentially, in my opinion, definitely an overestimation to say. You can use just this font and all the other challenges go away, because regardless of what form you're going to be using, you're still going to be wanting to use concise language. You can have something like openness lecture as a font.

And if you're using incredibly complicated language and content that hasn't been structured and chunked into turning into headings and lists, et cetera, well, that's materially not gonna have the same benefit as a less air quotes, scientifically accessible font, where you have made very strong decisions in terms of the conciseness, in terms of the technical jargon and how much you've chunked up your content into logical individual sections, where that is always going to be the king again, not, not trying to poopoo fonts too much only to stress that there is a broader conversation to be had on those broad things to be thinking about.

Now those cause I've whistle stopped through my, of my slides today. What I can just do well actually I'll ask any any, I'm more than happy to spend a few minutes going through some of the questions otherwise I'm okay. Handing back to yourself. What would you prefer that I do?

**Annie Mannion:** I think we're going to have to end the session cause it's two o'clock now, so, but we will, we will we will go through.

The questions and then answer any by text on our webpage that are outstanding to answer

in a couple of days. You'll be sent everybody that's registered will be sent an automatic email that has the link to the webpage that will have the answers to questions on there. And also the recording and the transcript and slides. But yeah. Thank you so much, divert some excellent points made and some really useful points to take away.

 So just a few bits of information from me that might be of interest. We also run a range of online training sessions about digital accessibility. You can find out more activities in that.org.uk for slash training. We have a developers course coming up this Thursday, which is about, oh yeah.

And the accessibility tree. And then the following Thursday about JavaScript and spa considerations. And then on the 21st accessibility testing and mobile apps and the 28th accessible mobile development. And then you can also use the the discount code AbilityNetWebinar10, for 10% off for webinar attendees.

If you could move on to the next slide, that'd be great. You can also sign up to our e-newsletter for slash newsletter for the latest announcements about digital accessibility. And we have a suite of accessibility services to suit your organization. And then finally, don't forget about the next three webinars at four slash webinars.

Next Tuesday, we have accessibility insights with disability rights campaign, Jonathan Mosen, who's also CEO of workbridge. And then on the second November, our next 80 public sector update with the University of Southampton. So thank you again, Dafydd and everyone that's joined us and we'll be in touch with you too.

Bye everybody.

**Dafydd Henke-Reed:** Thank you everyone.