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WVU-CED MEETING

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SPEAKER: Started this in 2013. Took Australia quite a long time to fully make the transition to digital television. The kinds of things that I was looking at was redesigning television to include people with disability. Lip reading potentially. The people who are lip readers, same idea of animated hands providing sign language. Spoken sub title which is the reading allowed of subtitles that provide access to different

languages and plain audio throughout the project this really emerged as quite an interesting idea was providing speech of a television show without any background sounds. So there are sometimes when you're watching a movie it can be hard to see what the speech is because the background sound track is too loud so playing audio was another thing so people were accessing as both an accessibility feature but also as a main stream function if they just for whatever reason preferred not to have the background sound up too high. We can redesign television which is an audio and a visual medium to be more accessible to people who might not be able to access the audio or visual for whatever reason.

So what we discovered was that people were very aware of what captions were in Australia we've had captions around I think it's the same situation in the US that closed captioning has been more widely available than any of the other accessibility features so in Australia at the time of the research and the survey closed captions were the only accessibility feature that we really had widely available on television at the time. So this was the accessibility feature people really said yes that would help make me watch television easier for me. Audio description wasn't really available at all on Australian television then so we didn't have a huge response to that but still fairly okay. This is a side note, audio description came in on Australian television last week. So this is research we did in 2013 and now we've gone through and it's all on. It's happening now which is really great. But these last three

columns at the end were what really sort of interested me as a researcher. So the clean audio, which I mentioned earlier, just having the audio track you would access, the large or color coded remote control keys, and talking menus also emerged as things that people with disabilities, these were the things that they wanted to see. And in qualitative sections of the research you know some other accessibility features were like a really big TV or a comfortable lounge and things like that. I thought were these really things that people with disabilities want because they're just watching television or are these things people with disabilities could really benefit from as well. I think we can see that with the talking remotes and talking menus.

It's something that we do use. People with disabilities and people without disabilities using these features just as flexible digital ways of accessing television. So in my research I started thinking about how can these accessibility features sort of be reframed as something that we can all benefit from and then could that then benefit people with disabilities who are fighting for these sort of access if they become more widely available. So got me thinking, I've always thought about universal design and all the work that I do. Audio, large remote control, and the talking menus I think are really great example of universal design. First is equitable use. However you need to use them. Third point principle of universal design is simple and intuitive use. You just figure out how to use it without needing to know a particular language or how to use a technology. And I think we see this a lot more often

now with mobile phones and web pages we expect them to be intuitive. If you try and access a web page that's too complicated. Web sites are designed to be simple and intuitive.

They can both use this technology doesn't matter what size or shape they are. So universal design is basically designing -- and allowing people to pick up a tool in a way that suits them. Moving on to captions. So captions are created to help people with hearing impaired access audio content. Presentation of audio visual content has text on the bottom of the screen. For instance descriptions of sounds laughter and music. usually situated on the bottom of the screen so as to minimize interference with the picture. So captions we generally associate them with entertainment media but actually since the early days of captions educators have considered it relevant in education for people with disabilities. A long time has highlighted that that when captions first became available education schools for the deaf were showing captioned movies to their students as a way to increase reading speed and things like that and gain access to audio visual material. So back in 2013 and even not that long ago in my research around captions on television as an accessibility tool I've come across people without hearing impairment really hating captions. Captions were not popular amongst people who didn't need them. but in the last couple years we've seen something really interesting happen with captions and that is that they've become a main stream tool. People are using captions for all sorts of reasons.

I have a couple of articles here. The first is off the Internet. From wired magazine I think and it's the real reason you use closed captions for everything now and this talks about how captions help you stay up to date with what's happening on your TV show when you're binge watching television. So this article is talking about how the more TV you're watching now the more TV we're missing. So closed captions are giving us access to the things that we might -- if we're trying to watch a series quickly. The other articles saying just get over your fear of subtitles. So the author is talking about how she really loves captions for a similar reason to the first article here that she can, it helps her retain her focus on the screen when she might be getting distracted by other things but she's come across other people in her life, she talks about boy friends who doesn't or friends who she watches next flicks with. What she does is she always gets the captions and introduces people to captions and once they start watching or binge watching television with captions they find all sorts of useprise this tool that they didn't really realize before.

Thinking about captions within the education context and we thought if people are using captions in entertainment what sort of benefits can captions have for our students. Our students are located in these intense media world where we are binge watching television and we are accessing online videos in a way that we never have before and if captions are widely available in all these contexts what

happens if we make captions available on our lectures as well. So we started this research back in about 2016 by captions three units in the Internet study degree. For one study period we offered captions on the online lectures where previously the only way you could access captions at the university is through what we call an access plan which is a disability access plan. What you need to do is go to your doctor and get a certificate that you have a disability or a medical condition that requires that requires captions on your lectures in order to access them in an equal way to students who don't require captions and then once that plan was in place the lectures get sent away to be captioned and then come back to you. So what we did with these three units was we captioned them and made all the captions available to everyone at the same time. And we also put out training videos on how to access the captions, how to use them as a transcript. At the end of that study period we interviewed everyone. We surveyed people. What did you think of the captions. And people were very positive about the captions. And then after that study period we didn't offer the captions again but the students were requesting them. So they did our three units and then they'd go and enroll in another unit and they'd say where are the captions?

Following that we just sort of kept an eye on the caption technology, what was happening with it, and we use a system called 360. I'm not sure what you have that. What they've done in recent years is started experimenting with automatic captions. Using AI to generate captions automatically. In 2018 we made those AI generated

captions available to students in 11 units. What we did is made them available, put out some training, tried to get lectured, say these captions are available check them out so you could use it as a study tool. And again we surveyed the students and they were all very positive about the captions in those 11 units so we repeated it twice. We did 11 units in one study period and the same 11 units in the next study period. The next year after that we interviewed 53 of the students who participated in those 23 units about their experience so we could get some more qualitative insights about how the students were using captions, what they thought of them, and if they'd like to have them on an on going basis and if the captions were accurate enough because this is a different thing this is A I generated captions they're not a hundred percent perfect but that felt pretty good. So in that project some of the 53 students we interviewed some identified as having hearing impairments. Some identified as having sensory processing issues. Things like that. But most of the students that were just students studying for their degree all of them were online students. And so what they were doing was basically all of them spoke about trying to study with distractions around them because they were distant education students. So we discovered a few things that I think are really interesting now that all of our students are distance education students and trying to study online.

What we discovered -- and you find this a lot with distance learning students is they're really aware of their learning style. They

know if they're visual learners, audio learners, they know, so they really spoke to us a lot about how they had diverse styles and how they used the captions along side the variety of other tools. The captions became just a tool within learning. If they were visual learners what they might do is download the transcript and print it off and highlight it so the captions were really helpful for them in creating a transcript which they could then visually look at. But if they were auditory learners they might watch it all at the same time and they were aware of getting different types of information traveling through different channels. So they expected the captions to be accurate. We showed them two different clips so one clip was accurate captions the other clip had some inaccuracies and it was interesting the way that they rated these clips. A number of other factors came into it too like the lecturers style of lecturing. If they interacted with other people in the room, if they repeated questions that were asked. So caption accuracy related on a number of different things but students really said they should be accurate, they should be accessible and accuracy will get better the more that we do this so they did understand AI technology that it improves the more we use it.

They did expect captions in online lectures because they're widely available in other media so people spoke a lot about using captions all the time. So captions are there I'll use them and if they're not there they spoke about being really disappointed that captions were not there. It's just something they've come to expect living in a

media world where captions are widely available and they did feel these captions should be made available in these lectures as well. Pretty much everyone we spoke to, 53 students, spoke about multitasking while watching lectures and using the captions as a way to retain their focus and improve their clarity. So some students spoke about watching their lectures at a high speed. So watching it in fast forward and using the captions that way. Which is problematic to me for many reasons but that was one thing that they liked to do. Or some students spoke about watching a lecture a number of times and stopping and starting. So this idea of stopstarting really featured heavily throughout these set of interviews and they said if the captions were there they didn't need to stop and start as much. They also considered captions as a way to provide correct spelling. Cultural studies and Internet studies we probably don't have that many technical words that require help with spelling but in other disciplines I think this would be a really big factor. As online students they talked about not being there in class to ask the question. How do you spell that? A caption could give them the answer to that.

They did talk about feeling left behind as online students a lot. They sort of felt like they were an after thought and teaching was always geared towards the people in class but captions provide them a way to be brought more into the class room. So whatever they were missing out on from the lecture they might be able to pick up through the caption track and they saw captions as improving the quality of

teaching in the online environment. Again going back to their learning styles they said again they described captions as a tool. Said the university should provide us tools to support our learning. Anything that's available to the university should be made available to us. So we are saying what are your hopes about captions? Do you hope they become more widely available and they said yes they hope that accurate captions could become a tool that could be more widely integrated into lecture that would then improve their comprehension of lectures and therefore improve their grades this idea came up a lot. Maybe captions will help me get a higher mark. Maybe more accurate captions will increase that mark by another five percent. A lot of hope around captions. And finally they also spoke about being aware they're dealing with complex visual and audio material in these online lectures and captions could provide that bridge again that they might miss out on learning from home when they have kids around or when they also have to do work. A lot of these students work full time and do this education on top of that so they have jobs they have kids they have husband's came up a bit. I have a couple of quotes that I really liked from this project I want to share with you guys.

First quote. So the students an online student. All their lectures are online. I will stop the lectures while I'm taking notes and sometimes replay sections if I've lost my focus, missed the main points or have difficulty understanding what the lecturer is saying. I usually watch, listen to the all he captures in our home office which is separated from

the rest of the family however I can be interrupted by the teenagers living in the house. Something that came up a lot is people were really protect of of their study time and they tried to separate it from other parts of their home or their family. So captions can help when those parts as they always do intrude on their education. The next student I want to quote said they preferred captions over sound. With sound audio some accents can be hard to distinguish words. This idea of axepts came oplot. Some lecturers have monotone voices and can make a subject quite uninspiring. Audio is harder to use at night while my husband is sleeping and I want to study. She preferred just to have the captions on and no sound at all because of these other factors that in fringe on her learning. So we finished this project, we just finished writing the report up last week, so all of this was done preCOVID. It really was. We're finalizing this report and now everyone's online, everyone's trying to study while their teenagers are wanting their attention or their husband's are around. We're all working from home.

So these insights from the caption study, these captions were made available a couple years ago now, it really has a different relevance now I think. So audio description is another accessibility feature that I really enjoy researching. I've also looked at how audio description can be used by the main stream population not just people who are blind. And I did a project week before last on audio description in Australia, what we did in this project was we looked at where audio description was available in Australia because it wasn't on television.

And we ran some focus groups of people with and without disabilities. Different groups. And introduced them to audio descriptions. How would you use this. How do you use this? Do you use it on netflix?

Audio description it's not widely available here so people don't know what it is. There's this kind of pervasive cultural belief that blind people don't watch TV, don't watch movies. So why are we talking about making television accessible to people who are blind when they can't see and television is a visual media. So we were thinking about introducing the way those with disabilities access television. Let's take a step back. Do blind people watch television and movies? And the answer is yes. Yes they do. There's research going back to the 60s that suggests blind people do watch TV and when they're made aware of what audio description is it fundamentally changes the television experience for this group. I have also come across a 1929 New York times article that describes the first attempt to attract a blind audience to a cinema. What happened in 1929 is the talk ease were coming in. So silent movies were on the way out and the deaf population were a big audience for silent movies because there were words on the screen there and everyone was watching movies the same way regardless of if they could hear or if they couldn't hear. So once talk ease came in a whole audience was lost to cinema and that was people who were deaf. So the studio decided who could we attract instead? They tried to attract a blind audience. There's this New York times article from neap 29 where they describe a screening of a movie where they invited

a hundred deaf and blind people to this movie and for some reason they only describe it. They didn't have captions or anything like that they just describe it'd to the blind audience. And of course the blind audience loved it they thought it was great to be included as an audience for the first time but it wasn't an on going way at that time.

Also there was a radio DV in Spain in the 1940's who use today describe sat matinee movies on radio for people at home. This is before televisions were in in a big way so people would be at home listening on the radio to these effectively audio described movies but these were just people who weren't going to the movies on a Saturday they were at home listening to it. That was an accessibility feature for both people who were blind or people who weren't able to go to the movies and this is before television came in. So audio description and blind people have been in gauging with audio described television and movies for a very long time. I have further research on that but I'll move on. So in our research we asked could audio description become main stream? And prior to beginning the project I went and spoke to a few experts about this and everyone said no. No. Audio description it's just way too specific to people who are blind people. It's not like captions where we have found main stream audiences but you know what people who are not blind are using audio description and again I've got a couple of articles here. I was on the audio description working group here in Australia a few years ago. We were talking about how audio descriptions could be used on Australian television. During one of our

meetings netflix came and talked to us and talked about audio description as a consumer experience not an accessibility feature. They put it in their language options in their interface. It's like selecting another language.

People who watched sensei which is a really complicated TV show they were really interested in audio description because it was giving some insight into the show what was happening. Went through different city's. People who watch it say they don't know what's happening. The audio description track was letting people know what exactly was going on. Fans of sensei were really embracing audio description as a tool. Which was really interesting. Another group of people were talking about how you can use netflix audio described shows as audio books. You can take it with you when you walk the dog when you get on the train when you're driving your car. So while we were looking into these audio descriptions they have become kind of a main stream tool or a new innovative flexible way of watching television. In the research what we were really interested in is how can other groups use audio description. We had read things that people with autism might benefit from audio descriptions because it could give insight into emotional world of some of the characters. So we had a focus group of people looking at audio description and really what we found there was that divided results some people liked it some people didn't. If we put captions on the track as well that was just way too much. This is a key area for future research that my group is looking at

audio description provide people with autism. We had a focus group of television fans. So people who wanted, what we're seeing now -- inaudible -- going finding out more information about characters about TV shows about exactly what's happening on screen. So we thought could audio description provide that just that bit more of information that people are interested in finding out about. So we had. We had a focus group on television fans and probably the main outcome from that focus group is that they could not believe that anyone would be denied the experience of watching television. They were all very supportive of the concept of audio descriptions. If blind people want to watch TV, make it accessible and it's horrifying the concept that it would not be made accessible to these groups.

We also wanted to look at people who were multitasking and doing other things. And that's probably the key idea that came out of these groups is that people do watch television while they do other things. no ones sitting down watching TV anymore. People talked about playing instruments, cooking, doing crafts, taking care of kids, things like that. We related to the television fans we wanted to talk to people who were enrolled as film students who might be analyzing some of these investigates visual texts and if audio description put off more information for their studies. They went in the television fans group. A group that we didn't get to run a focus group on because this is quite targeted is medical students came up in the research as potentially benefiting from audio described lessens. Having someone

demonstrate a medical procedure while it's also being audio described at the same time is something that's being suggested as being quite beneficial. Relate today my caption research group we're seeing in the same information in different forms can be really beneficial to different groups. We looked at people who were reading audio books and something that came up in this group is that someone might be going the audio book track because just holding a book might be disabling for people once they get to a certain point in their life so audio book right side in abling them for that reason and could television shows become a form of audio book and again results, people like their bacterize their books and their television for their television. So the benefits of audio described TV were lost in terms of the watch television in other places. Doing their cooking, playing an instrument, craft, as a replacement for audio book.

Some behind the scenes research is that audio description could be used by journalists cataloging. That's a whole other area of research. Something we're looking at now is audio description itself as being creative and becoming part of the production process. So people writing films and television with the audio description in mind does that change the kind of film or TV that we get and there's some work happening in the film industry here in Australia looking at those sorts of ideas. So the people with visual impairment and people with autism that we spoke to they liked different types of audio description and there's actually different styles of audio description depending on

where it's made. In the groups we showed a scene from tron the movie tron. We showed it audio described in what's called the British style of audio description which is really nonemotive and just a straight description of what you'd see on screen and we compared that to the American style of audio description which was really theatrical and evocative in the kinds of descriptions that took place. It was a fight scene, it was a really exciting scene. the American style was probably the preferred style of audio description but some people of course did prefer the British style and so what we thought would be interesting to research is different styles of audio description and how that can impact on the user experience and if you're using audio descriptions for accessibility reasons. For example if you're that television fan wanting to find out more information which style do you prefer. If you're a person with autism or if you're a person who has a visual impairment do you prefer a different style of audio descriptions so I really think this is a great area this audio description research that people when we started it really thought that this was something that would be really specific to blind people but we're find tag maybe it's not and could be another side of innovation for the television field.

Some of our participants, when listening to the examples provided I found myself picking up my much neglected knitting. I was able to focus on knitting while still following along with the video which is something I would previously find difficult to do. I could see myself using audio description enabled content while under taking other tasks

or where I know I'm likely to be interrupted usually by a little one. So this idea of multitasking as I said kept coming up and people would find the craziest things to multitask while watching TV. We had one participant who spoke about playing the guitar while watching TV and listening to audio description which is a lot of input right. But creative person who said he would like to do that. Other people talked about how we're living in a really multitask heavy society already and maybe we should stop finding ways to multitask and just concentrate on doing one thing at a time but that person did say they would use it while cooking or cleaning. I usually prefer not to multitask but I think we're encouraged to do it way too often but I do like the audio descriptions for cooking. You know. Just to wrap it up I know I'm going over so both of these projects were looking at disability access but the main stream access and they both took place preCOVID. Now that we're in COVID we're encouraged to stay home save lives both projects really had these two points came up write heavily. Audio descriptions or captions help retain focus while being distracted by domestic responsibilities, kids or work. And now we're all home with kids and other distractions and we're trying to multitask and take care of kids and work. Can captions and audio descriptions help us out? This is in fact being spoken about now.

On Facebook. He she talks about how captions is the one feature you should offer students in this online education world we're all finding ourselves in. She's put out graphics on how you can caption.

But also some app that have in built live captioning and what she says is the accessibility, the accuracy is probably between 80 to 90 percent which isn't considered reaching the ADA standards but these do have live captioning tools. Some are better than others. And they're being used and they're becoming more available and as we're all using zoom and whether it's in skype to teach our students, we can also start experimenting with captioning, make them better by using them more often. Something I didn't mention in the caption research was that captioning doesn't just help people with hearing impairments it helps students in other at risk groups likal spoken language, part time students, mature age students, elderly students, students with autism also use captioning and a number of other groups so this is something that's getting some attention now that captioned videos could be helpful as we teach online. I just read a book about how to audio book netflix in COVID and why this is important. So the idea is that we're all apparently we're staying home so we're watching a lot of netflix because we have to find something to do while quarantining and this articles saying sometimes when you're home it's just not possible to keep your eyes on the screen. You might actually be working on something and so on. But one option is to just keep your favorite film or book running and peek into it from time to time. Another option is to keep pausing it. There's another way around it. You can listen to the netflix film or show just as you would appoint audio book complete with music descriptions and dialogue. Allowing you to visualize the movie even if you're not in a position to watch it. Those audio book ons netflix

might help us get through the self isolation. Staying home We're all hooked on netflix while trying to do other things. Watching the TV show while doing other jobs around the house.

And just to finish up I want to finish with two quotes which were two e-mails from different people in my life that I've gotten in the last couple weeks. Ones from a person with a disability and ones from a person without a disability. Both of whom are staying home at the moment. She said her life is practical terms, better right now. She can access so much music art and culture online. She's getting free delivers from so many more places. Getting rebated health, the whole banana. The online world opening up to provide access, her life is better for that. My friend who's stuck at home she said well actually I'm really enjoying having everything come to me. On Easter Sunday she did yoga class in Baltimore, church in Texas and watered my garden at home and didn't have to leave her property and video chatted with friends on Saturday. So these are people with and without disabilities experiencing the world in different ways and it's providing them access to life, to cultural life, to social interaction, kind of in the same way as each other. So just to wrap it all up the point of this whole thing is that flexible digital environments benefit everyone so we should make them open accessible and flexible for people with disabilities and designed for technology in a way that suits as many people as possible in intuitive ways without a need for special design. And that is it for me.

SPEAKER: All right. Well thank you that's interesting. I'm going to just remind everyone I'm going to unmute you or tell you if you have a question why don't you unmute yourself because I know there could be some background noise and we'll just take a few minutes for some questions if you don't mind Kati and then we'll go. We have some things in the chat too. I do have a question for you. Based on your presentation it sounds like individuals providers within disability services individuals with disabilities themselves have been using these technologies for a while. More than the general public. But now that the general public is using them it sounds like an opportunity that they could become the teacher, the instructor, what would you advise, I mean what opportunities exist for us to take advantage of during this time.

SPEAKER: Mobile phones. They're designed for people with disabilities. And they're being embraced by the general population. There's an opportunity there for people to take on a teaching role. Teaching people how to use smart phones in a particular way. Or people who are newly disabled about how they can use their phone. But now I think we should be looking at how people with disabilities have been living and working from home and creating flexible digital environments for ages. Listening to them and learning from them and looking at the kinds of requests for access these groups have been making for a long time. Always been no, that's not possible. Now we've been thrust into the situation. I've been reading articles about -- inaudible -- people with disabilities working in media previously. And

something that's come up is that this idea that no you have to work in news when you cannot work from home or you cannot work out of the office it's just not possible but now the industry has had to do that. People with disabilities are saying we've been talking about this for ages can you listen to us. The hope is that we will really learn from this experience and make changes going forward to allow people with disabilities -- I've got Siri going off here. Allow people with disabilities to have flexible work environments so they can be included.

SPEAKER: That's a good point. Thank you. Any other questionize people have been enjoying your presentation.

SPEAKER: Thank you for inviting me.

SPEAKER: Absolutely. We'll have to have you again after COVID-19.

SPEAKER: Yeah.

SPEAKER: Great and I know it's late there so we're going to let you go and get back to your family and maybe get some sleep. But thank you so much. We really appreciate it.

SPEAKER: Okay thank you.

SPEAKER: Thank you. Thanks everyone for joining we'll see you later.