DEBBIE ROOSKOV: I would like to welcome everybody to this session. My name is Debbie Rooskov and I'm one of the National Disability Coordination Officers, and I welcome you to this session: Largescale implementation of same-language subtitles: A case study with our presenter Dr Stuart Dinmore from the University of South Australia.

This session is being live captioned. Thank you, Miken. To activate the captions, click the CC button in the toolbar that is located either on the top or the bottom of your screen. We also have captions available via the browser, which David is putting in the chat box. So, what we are going to do is start this session with a presentation from Dr Stuart Dinmore, and then we'll wrap up with a ten-minute Q&A. So, during this session, it is being recorded, we ask you to please turn off your camera and microphone and to also use the Q&A function to pose questions. Please chat amongst yourself, but we'll be monitoring the Q&A function so we can ask those questions later in the presentation. We'll put all this information in the chat box, so you don't need to remember it all, and I'm going to hand it straight over to Stuart. So, thank you very much.

STUART DINMORE: Thank you very much, Debbie. And thanks for that welcome. And hi to everybody out there. Thank you very much for coming along. I hope you are comfortable. I know that these online sessions can be a little draining to look at the screen, so I hope you have made yourself a cup of tea and you’ve really enjoyed your time so far.

So, my name is Stuart Dinmore. I'm an academic developer with the University of South Australia, and I work in the Teaching Innovation Unit, and we work as a unit across the University working with just the teachers, not with the students, which is interesting.

So, what I want to talk to you about today is a project we've been running for a number of years about same-language subtitles. A note from the keynote today that Sheryl nearly stole my thunder talking about captions. She briefly went over a couple of the things I'm going to talk about today, but hopefully we can talk about some other things in a little more depth, but she was absolutely right in what she was saying, same-language subtitles really do represent the universality of the UDL of universal design, and I’m going to talk a little bit more about it today.

So, as we begin, I would like to acknowledge the traditional custodians of the lands that I'm speaking to you from, and that is the Kaurna people of the Adelaide Plains. And I also acknowledge the traditional custodians of the land on which you today are living, learning and working.

So, this session, I'll move down so I can see what is happening. Okay. This is a slide you will have seen so far, and I’m sure you’re going to be very familiar with this slide. I'm not going to go through this today. This is some pretty basic stuff.

Session etiquette, obviously you're all familiar with this online setting so I won't harp on about this too much, we've all been through this slide, but it's my duty to show you this slide as part of the session. One thing I will say about the Q&A is I hope we can have a little bit of a chat at the end. I think that is where the most value in these sessions come, but please feel free to post your questions in the chat at any time during this session and we'll get to them at the end. Thank you very much. So, yeah, feel free to post things at any time.

So, what we're going to be covering today is just talking a little bit about multimedia in higher education, in higher ed. I will talk about multimedia and accessibility and putting the universal in UDL. We'll cover some of the benefits of same-language subtitles. Sheryl did touch on some of those but we'll expand on that a little bit more, and I'll give you some data from a student survey that we carried out last year with a large number of online students which shows real interesting results around these things. Then if we have time, I'll briefly touch on a case study from the University - UniSA online, which is a wholly online section of our university, so it’s a wholly 100% online asynchronous delivery which currently has 6 or 7,000 students, so it is a huge part of our university.

Part of that case study is we have achieved same-language subtitles with a hundred percent accuracy on 100 percent of pieces of media in that unit, so I’ll talk about the way we approach that, and then at the end we’ll talk about some things to consider if you are thinking about doing something like these.

So, why? Why produce multimedia content for your students? There are a range of reasons, and I could speak for a couple of days about the range of reasons, but in the context, we're talking about you. Flexibility is the key part of why it's been such an explosion over the last ten, 15 years and watching the content being produced by universities. Some of the reasons, and we hear from our students, we hear from our staff, is self-paced learning, particularly in asynchronous environments, students can watch videos whenever they like. They can watch them in the bath, on the bus, they can slow them down, they can speed them up, they can repeat them. I'm sure you're all familiar with the concept chipmunking where students speed up a video, and obviously their lecturer’s voice is sped as a chipmunk. So, it really lends a huge amount of flexibility to all students.

This obviously feeds into time management. We know a lot of our students, and particularly in my institution, are rarely just students, they have a range of other responsibilities, so time management for the students in this particular importance, the flexibility afforded by multimedia just fits in with the student profile.

Most importantly, what we're talking about today is equitable access to this content. And subtitles really remove barriers to learning for a lot of students. It's really a great example of what universities can be. As Sheryl mentioned, quite a small thing that can really change that access to the content. Removes barriers for all.

So, we asked those students last year, in the 100% online space, they do watch these videos, “Do you ever rewind or pause a video while watching?” And you'll note that 97% of the students always usually or sometimes pause or rewind a video. There is obviously a stark difference between a video or multimedia presentation than a lecture. It really speaks to that flexibility of this part of content for a range of student needs, and obviously they are really using this. So, we're talking 60, 66% of the students usually or always – that’s two thirds of the students – usually or always pause or rewind a video we're watching. This speaks to that whole idea of universality of the content.

So, some of the advantages. It makes content accessible for deaf or hard of hearing people. We know from the data about 3.6 million people in Australia have some form of hearing loss. It helps attainment or comprehension of an additional language. Variously across the higher education sector in Australia is upwards of 20% of our students are international students, so this attainment or comprehension of additional language is super important. It makes content accessible in sound sensitive environments. We know that houses these days have multiple screens and people have multiple needs and locations in the house, and so it really allows them to consume their content in sound sensitive environments. It's a great idea. Increases the comprehension, spelling, and pronunciation of discipline-specific language. So, this is something that we found is really important in the science fields, in the STEM fields where in a field like physiotherapy, use a very specific form of language. So being inducted into that field and becoming part of that field is actually - a large part of it is about learning the language and the spelling of those different types of language, and it becomes a really important part of your induction into that field and your knowledge of that field, and it helps all students to be able to see that language in context. How is that language spoken? How does it sound? How is it spelt? And the same-language subtitles can really help promote that learning among the students.

Another thing that we found can be really handy is that these subtitles or captions can be turned into transcripts; that's written pieces of text the students can read. That can be also a different way for students to access the data.

So, these are kind of the main advantages of SLS, or same-language subtitles. I’ve put a link there to an article from Morton Ann Gernsbacher. Video captions are better for everyone. So hopefully you can access that link. I will send it out as part of this presentation. There is a huge amount of data in this article that really speaks to all of these advantages, so if you want to dig a little bit deeper into some of the research that is going on behind the scenes, then you can find it all there.

So, just a couple of examples of the data. Did you read subtitles while viewing the course? We see, again, a huge amount of students took advantage of the ability to read the subtitles. This number of students is much larger than students with disabilities. You can see it's really universally used by students. This a more interesting one. Did the subtitles increase your understanding of topics or concepts in the course? 57% of the students said that it did. I was hoping for it to be a little bit higher, but I think that's still a reasonable result when you're looking at over half the students have their understanding of the concepts increased by having subtitles. Actually, I think that is quite a decent result. So, you can see again, really universally helpful for a lot of students.

Here are some quotes from that survey. We don't have time to go through those, but you can see the top there, “As a hearing impaired student, I find subtitles essential for video viewing.” That is really what this is about in this context. I would encourage you to come back and look at these. Obviously, we will send out the data.

So, going on to the case study with the moments we have left. UniSA Online is a 100% online academic unit with 6 to 7,000 students all around Australia. Predominantly in South Australia but on the eastern seaboard, and we have students internationally. So, one of the things that we did when we began this unit in about 2015 was, we made a commitment right at the start that we would offer 100% same-language subtitles on the live content. We launched a research project on the best way to do that, and I will talk a bit about some of the results of that on the next slide.

So, now with 6,000, 7,000 students, there is probably about 4,500 pieces of multimedia content. In the most part this is videos, spoken videos, voiceover PowerPoints, animations, ones of mini feature film, interviews, all of these sorts of things, and they all have same-language subtitles. This is supported by a multimedia team, and crucially, we pay for an external provider to create subtitles. So, this is where we get into what are some of the tips and some of the considerations that you might have if you would like to start to implement this in your institution. So, that's the case study. We made that commitment from the start, we got in on the ground floor with the design of this unit, and it's been tremendously successful.

Some things to consider if you want to implement this in your institution. It's interesting that we have a transcriber with us today, so you see there is always the need for human intervention in the auto transcription or transcription process. So, we found through our research projects that auto transcription is very good, but never 100% accurate. This will require human intervention at some stage. We know that - I'm sure many of you have experienced this - that the auto transcription of audio has improved in the last ten years, incredibly improved. Ten years ago we would go into YouTube and we would try it for our own amusement, it was so terrible, and it has really improved a lot. YouTube, definitely improved, and we use a content management system at UniSA, for example, that uses Panopto, and their auto transcription service is excellent. It includes grammar, it will do capitals and commas and those sort of things, so it's actually fantastic. It is never 100%.

One of the things we found from the project, that high accuracy of auto transcription - the highest factor, the biggest factor is audio quality. This means clear recording with no background disturbance. It does not require an expensive mic, it is more to do with mic placement. So, this is about having the mic positioned from your mouth correctly so you don't get those explosive sounds around the Ps and the Ss. That is hugely important. It does not require a really expensive microphone. If you have a really expensive microphone, sure, it's great, but it doesn't necessarily mean anything. An expensive microphone poorly placed will still give you a bad result. Quiet background is also extremely important.

We noted in the research project that accent and speed of talking was way less of a factor than this microphone and the audio quality. So, if you are going to start relying on auto transcriptions, I would highly recommend really concentrating on doing some training around correct microphone use.

What that comes to the conclusion of is that even high accuracy auto-transcribed subtitles are better than none. So, if you can't afford to get human intervention, to afford that service, high accuracy auto-transcribe subtitles are better than nothing, and students will often adapt to those, and obviously if you go back to the previous bullet point around getting a great audio quality will really help you.

DEBBIE: Stuart, it's Debbie here. I want to jump in while you're talking about the autogenerated captioning, around that. We have a question that's come in, and it kind of flows on from that. And it's mentioned that the academics need to manage their own subtitles, and some disciplines are very much more challenging to get the word and terminology correct, particularly in the sciences.

STUART: Yep.

DEBBIE: So, they're saying, is it worth just having the autogenerated captions, is it better than not doing anything in that space? And then we had someone mention that Microsoft Stream is quite good, and they've had some great success with that, because you can edit it, and I think they said it’s 97% correct. Would that be the one that you would suggest people use?

STUART: I'm not familiar with Microsoft Stream. I've used YouTube, which is the Google one, and I've used Panopto and I’ve used a little bit of Echo360. I think they are - I understand anecdotally they are all pretty much on par. If I can talk about my experience of using YouTube, and Panopto, and I imagine Microsoft Stream is the same, when you go into edit your captions, if you are talking about a 97% accuracy, that's great. Won't have much work to do. But you can go in and you can select - you can teach it the words that you need to do. So, for example, when I do presentations, I'm on Kaurna land, and I speak about being on Kaurna land, and in the auto transcription it comes up as G-h-a-n-a, a country in Africa, but I told Panopto, “Actually, what I mean when I say Kaurna, is Kaurna, and now it autocorrects to that. So, it is about making a little bit of effort, and getting those key words and telling the machine learning, I guess, to this is what you mean by this in future. So, there is some human intervention that is required there, but for those key terms you can definitely get them. I haven't used Microsoft Thread, but I will definitely look into that. Thank you.

DEBBIE: Okay. I am putting it open for questions. Those ones came in during your presentation, Stuart, so I jumped in with those, but is there any other questions while we have an expert here that we can tap into their knowledge and expertise? I must say, I'm looking forward to getting your recording back, Stuart, and putting in the fast mode for the chipmunk. I never thought I would.

STUART: The opposite is true. We do have some lecturers who speak way too fast and they get slowed down, and I don't know what we would call that colloquially, but they definitely slow that video down because some lecturers when they get on a - it is interesting what Tamera has said about when you watch a TV show with the closed captions. I read some things on Conversation recently that an incredibly high amount of people watch Netflix and other streaming services with same-language subtitles on, and I certainly do that when I'm watching particularly American programs, because I can't understand what they're saying.

DEBBIE: From the south, you know.

STUART: Yeah. I mean, they tend to mumble. And if you're looking at these really intense programs like Succession, for example, you don't want to miss anything that is said.

DEBBIE: Definitely.

STUART: I think a lot of people are using – and I know my kids, I've got three kids, and they watch all of the streaming services, they watch with the same-language subtitles on. Absolutely.

DEBBIE: I think you need to direct them into the documentaries, because their absorption, as you said with your research, they remember a lot of things if they're doing the captioning as well as the recording.

STUART: Yeah. I think that's true. That article that I mentioned, there is a section in there where there was a marked improvement with students retaining information when they’ve used the subtitles. Absolutely that is the case.

DEBBIE: Yes. Well, Stuart, thank you very much for that. I'm going to look at winding up so we can get back into the lobby.

STUART: Okay. No problem.

DEBBIE: But it's a topic - and I think it's great that, you know, if you repeat anything that Sheryl said, I think it's great. It’s all wonderful knowledge and it's great to have it repeated a few ways and in different format, so I think it's just brilliant, and it’s certainly a topic I would have liked to have longer. You did very well to make it so succinct in the 15 minutes that you were allocated.

STUART: No problem.

DEBBIE: So well done to you. And I would like to thank everybody for coming along today. I would also encourage you to check out the poster presentations on the ADCET website under the UDL little banner up the top there as well. Thank you, Stuart, I really appreciate your presentation and the sharing of your information, as with everyone else that has made it today. Thank you, and I wish you all the very best in the afternoon sessions that everyone is attending and thank you again.

STUART: My pleasure. Thank you for having me.

DEBBIE: You're welcome. Thank you.

STUART: Bye.