# EDUCATION AND HEALTH STANDING COMMITTEE

## **HEARING WITH DR MASON**



TRANSCRIPT OF EVIDENCE TAKEN AT PERTH WEDNESDAY, 15 MAY 2019

### **Members**

Ms J.M. Freeman (Chair)
Mr W.R. Marmion (Deputy Chair)
Ms J. Farrer
Mr R.S. Love
Ms S.E. Winton

#### Hearing commenced at 10.30 am

#### **Dr JONATHAN CHARLES MASON**

Senior Lecturer, E-Learning, Charles Darwin University, examined:

The CHAIR: Good morning. **Dr Mason**: Good morning.

The CHAIR: Thank you very much for making yourself available. We are the Parliamentary Standing

Committee on Education and Health. I understand you have had a bit of a chat to Sarah.

**Dr Mason**: A little one, yes.

**The CHAIR**: Yes, and familiarised yourself with who we are and what we are seeking to do. Just as a bit of background, we are just having an initial investigation into ICT and digital technologies and other aspects in education, but before we start any questions, I have to do an opening statement because this is an official hearing. So I am just going to do an official opening statement.

On behalf of the committee, I would like to thank you for agreeing to appear today to provide evidence in relation to digital technology in education. My name is Janine Freeman. I am the Chair of the Education and Health Standing Committee. I am going to introduce the other members of the committee. To my left is Mr Bill Marmion, who is the Deputy Chair. To my far left is Mr Shane Love, who is the member for Moore; Sabine Winton is here on my right, who is the member for Wanneroo; Josie Farrer is on the far right. She is the member for Kimberley, which given you are in the Northern Territory, you would have some appreciation of how large and vast the Kimberley is.

Dr Mason: Yes.

**The CHAIR:** You have agreed to provide evidence to the committee. Your evidence is protected by parliamentary privilege in Western Australia, and protected by uniform defamation laws in Australia against actions in defamation. Please note that these protections do not apply to anything you might say outside of today's proceeding. It is important that you understand that any deliberate misleading of this committee may be regarded as a contempt of Parliament.

As you can imagine, some committees have very contentious things. I am sure that our discussion will not be too contentious this morning, but I did need to go through those. Would you please introduce yourself for the record? We have Hansard here as well. You cannot see Hansard over here, and Sarah and Jovita, who are our parliamentary researchers are here in the room as well. Please introduce yourself.

**Dr Mason:** Thanks very much, Janine, and it is nice to be able to at least see three of you there in the room. This is a new experience for me, so I feel —

The CHAIR: Snuggling in!

**Dr Mason:** I can see a few more heads. As I said, this a very new experience for me, although I use this kind of platform quite regularly in my work because CDU is very much an online university and we have these kinds of engagements quite regularly, using video conferencing et cetera.

Just a little bit about myself. I have been at CDU now for coming up just over seven years. I have a background in working in the education sector, but also government services. I was very much involved in the design and development of EDNA, Education Network Australia. Some of you may recall, initially going way back when it began in 1997–98. I was with a ministerial company at that stage called Education.au. I worked with them for about nearly nine years. We developed all kinds of portal-based services around education and training, very much focused on using digital

technology. While involved in that project for that period, I was also involved in international standardisation, the right to learning, education and training and had been participating in a range of different industry consortia as well as all standard organisations for nearly 20 years now in relation to IT emerging technologies in education.

Most recently, I have been employed by the College of Education at CDU in my role here as a senior lecturer and also as a researcher. I teach mostly in the area of digital technology and its application to education, in initial teacher education, but also professional learning for teachers. I could say more, but is that enough for an intro?

**The CHAIR:** It is great for an intro. Thank you very much for that. In terms of students and teachers, can you give us an idea of what you think is essential in terms of digital education and digital technologies for, in the first instance, students, and then maybe we can move to teachers, from your perspective?

**Dr Mason:** Well, I think this is an agenda that has been growing and evolving for some years now. When I was at Melbourne University in the early 90s, I remember designing a program for teachers all around computer literacy for the 90s, as we thought it was —

The CHAIR: Cutting edge. Yes.

**Dr Mason:** It was on the edge; it was at the front end. For anybody interested in that notion of computer literacy, e-information literacy, digital literacy, all the various multi-literacies that we now have, one of my PhD students is actually doing a study on this and looking at the various digital, literacy digital capability frameworks all around the world. It keeps evolving rapidly. So there has been a bit of a shift in the language that has been associated with that over the years. I anticipate that there is going to be ongoing change there because the skillsets I think that were required back in the 1990s, which could be summed up with learning how to work with a desktop PC, to the skillsets that we require now are so different in terms of the capability of our smartphones, for example, and the ubiquity of the smartphones.

Also, I think it is telling that we are using that word "smart". It has been around for a while now, deeply embedded in our discourse when we are talking about digital innovation et cetera, but my take on the history of the web-based internet is it has moved from search to social to smart, so I see there are three distinct enablers around the technology and the skills that emanate from those pivotal kinds of technologies.

You would all have experienced the enabling nature of, I think, each of those three areas of the technology, but I think the frontier we are at now is at a really interesting and potentially dangerous time, in many respects. The digital revolution rolls on and I think all kinds of exponential bursts of innovation are going to disrupt. The essential skills, I think, have moved forward and they should not be trivialised as just being able to operate a computer and swipe left and swipe right or friend someone, or being able to do that kind of routine activity that we all do. I think that the skills are spilling over into different areas. So the word "smart", in a way, I see as a pivotal term, a key term here, because not only do we need to be working with smart systems and smart technologies where there are all kinds of sensor environments utilising data. We need to learn how to be smarter with this stuff. We all know about what has happened with fake news and misinformation and tribalism and bullying on the net. There are all these kinds of issues out there that are emanating as a consequence of the technology, in a way.

There are issues to do with social cohesion, privacy, security, awareness of the origins and destinations of our personal data. We need to know about all these things and I think it is really important that students know about these things. So no longer, when we talk about digital skills are we talking about just knowing how to operate a computer and surf the web safely and do a few of

these things, but we are moving into an area now that is going to be hyper-charged by artificial intelligence, the internet of things, mixed realities and big data.

[10.40 am]

The CHAIR: So for a student, are you saying that the aspects that they require is that the technology competency will almost be par for the course because they have availability, but that what we will be needing to impart to them in an educational system is the judgment, the guidance and the capacity to discern the information that is coming to them and the capacity to control it in a manner that does not overtake them? There is that whole aspect that what happens with us with use of technology is that we try and multitask, and it is no good for our brains in terms of that is not necessarily the best way for us to be able to focus and concentrate and achieve. Is that the sort of stuff you are saying, in terms of smartness, or are you saying they just have to understand all of what is going on and we need to give them all of the tools to know all of what is going on?

Dr Mason: Well, I guess it is a little bit of both. Let me just go to your first comment there. I also feel that we have been using this phrase in the education system, "twenty-first century skills", for over two decades now. That has been tightly coupled with the notion of employability skills. In fact, that is where it has emerged from initially, certainly in Australia, a notion of twenty-first century competencies and employability skills. To generalise, those skills have been pretty much articulated in the same way now for a few decades. When we talk about that the core of those skills, all about being to do with collaboration and communication and creativity and critical thinking, the four Cs, but I see a lot of pressure to re-articulate and perhaps refurbish what those skills actually look like. You used the word "discernment". As it happens, I have just recently written a paper called "Literate, Numerate, Discriminate—Rethinking 21st Century Skills". I think that we need to find another term around the notion of perhaps being data literate, knowing about the origins and the destinations of our data, knowing that we are living more and more in a world, you could call it, of surveillance capitalism; that is terminology that is used. China has its version of what that is all about but we do, too, in the west with the way that Google and Amazon, Facebook and everybody else uses our data. So, yes, I think if we look at the Australian curriculum, for example, we can see that the 21st century skills, again, they are embedded, so those four Cs I mentioned before are very much there, as is the notion of ICT capabilities, are part of the general abilities within the school curriculum. But I am coming to a view where we need to refresh the terminology that is associated with that core part of the curriculum. I also think that, given you are a committee that spans both health and education, there is a wellbeing, a social and emotional agenda here, that intersects with what is happening in the digital space.

**The CHAIR:** Yes. We did notice that, of your interest you have, wellbeing and mindfulness. I am a meditator from my early 20s, so the staff pulled it out and said, "How do you combine your interest in mindfulness with the new technology?" Do you want to expand on that at all? For my purpose, more than anyone else's, or would that be a whole separate hearing?

**Dr Mason:** It could be a whole separate thing, but let me just be frank about that. I worked on a project with a colleague, Sue Smith, on mindfulness and teacher wellbeing a few years ago. We had aspirations of making good use of what we called the "affordances" of digital technology around building a community and making things easy for connecting with each other and to share stuff. But as it happened, the need, from the teachers we were working with was all about the disconnect. They did not really want to know about the digital domain while practising with this sort of thing. Having said that, we are currently, Sue and I, working on another project here that is trying to connect wisdom and ethics with agendas like the STEAM agenda. There are all these agendas swirling around at the moment that are really important in education and you would know about

STEM/STEAM being an important one and social and emotional learning being another, with digital inclusion being another.

We are seeing a bit of an overlap and a connect here, and recently I noticed the launch of a new online program from a university in the US called SEE, "Social, Emotional and Ethical Learning", and it is all delivered online. So we are quite interested in tracking a lot of these new initiatives ourselves in this next little period and seeing what we can do about making a proposal for running a course in that particular area here. Certainly, ethics and wisdom, being able to discriminate the fake and real in the media from the trivial and all that sort of stuff, are important skills. Yet, people are becoming ever more deeply coupled with the digital tools that are used for that.

**The CHAIR:** Just back to when you were talking before about the four Cs and refurbishing those ideas, are you aware if the Australian curriculum is under review? You are saying that the curriculum is pretty much 20 years old. Are you aware if it is under review?

**Dr Mason:** Well, I am aware that the Australian Curriculum is perennially under review because when it was launched, it was already under attack. Of course, from time to time, the Australian curriculum gets heavily politicised. When I am working with my students here, I get them to look at the public policy agendas and look at the curriculum and try to be mindful about that sort of stuff, too, because it is all going to change; it will change. There will be different priorities that get articulated and brought to the fore in the curriculum. So I do not expect the curriculum to be stable, necessarily, for that long. It will evolve.

**The CHAIR**: So just on the ground, in terms of delivery, are you aware of ways or capacities for digital technology that can be used for teaching in remote areas? Do you have experiences of that?

**Dr Mason**: I do not have a lot of experience myself in delivering to remote areas. Having said that, I have students who are employed teachers sometimes joining some of my online classes and will join from quite remote areas. They are able to do that. So there is a range of technologies that enable that to happen. One of the reasons why we use Webex, this platform we are using today, is because it is so tightly integrated with telephony. So at a minimum you can have good audio connection happening there as well. So it is not necessarily all about the video. No, I do not have a lot of close experience myself, although one my PhD students who is Indigenous has a bit of experience with that. I know that my university is involved in an annual event called Broadband for the Bush, so there are often activities associated with that. But to go back to your question, Janine, what precisely are you wanting to find out there?

[10.50 am]

**The CHAIR:** As I said, we are still at the early stages of investigating, but we went to one of the schools in Western Australia, in Perth, and witnessed them using really good technology, digital technology, to have classes. Shane, was it almost—it was classes that were running with —

Mr R.S. LOVE: With certain feeder schools, is it? Yes.

**The CHAIR:** Yes, with feeder schools. They were feeding into primary schools and there was a delivery of some classes so that their transition, when they came to the city to get further schooling, in the upper years, was a bit easier. There was a variety of reasons. It was some time ago since we went there, but yes, we were quite interested in looking at that. But what you are saying is that the way you use it, is as a tool for assisting teachers who are teaching in remote and regionals and that is —

**Dr Mason:** That is my direct experience at the moment, yes, but I am certainly aware of other activities going on and there are all sorts of new apps being developed all the time that are really quite enabling for Indigenous remote communities in their use of local language. I think digital technology can be a great enabler there, but just to recap what I was saying before, I also think, and

I also know, that digital technology can be quite destructive and not necessarily a force for good. Its rollout and its access needs to be—we need to build this infrastructure in a smarter way and in a wise way. I do not know what else I can say about that.

Mr W.R. MARMION: I am interested in the education of children as they come through and the impact on them of technology. So there are two aspects in terms of curriculum. There is the actual use of the technology and the ability to actually, I guess, use it to design stuff, so there is the more technical side. There are two streams. Of course, you have kids coming in from kindergarten right through to year 12, and maybe some children are not suited to it, I do not know. I am interested in how you bring technology into schools and how the children learn. Do some children only need to know how to use it, but do you have to also make sure they perhaps have a little bit of taste of how they might be able to design it themselves? It is a very complex issue, I see. Some people might say it is the way of the future, and then you lose some of the standard learning techniques that are not digital. So it is very complex, and we are trying to grasp that—I am trying to grasp it—so I would be interested in your views on that.

**Dr Mason:** Yes. Well, it is a good question, Bill, and an interesting comment. I am also very much interested in it, and I will just tell you a quick little story about that and young kids. I have been a foster carer for a young girl. She is now 12, and when she was only two, at that time, 10 years ago, there was a book that was written by the person who made cloud computing really common in our public discourse. He was invited out by Telstra to give a keynote at a conference I was involved in. One of his books was all about the shallows and how we are only learning how to be skimming the internet. I have seen that the internet has become an interruption kind of space and it is distracting us by not learning how to think in a really focused kind of way. As it happens, this little girl has got her iPad in front of her, with all sorts of apps, and I tell you what, it was just extraordinary to watch her just be absolutely absorbed in this environment before she was really even forming basic language skills. She was really able to focus and learn some of the basic activities on the iPad.

So, yes, I am aware there is a debate out there around screen time, and what is healthy and what is not. Obviously, we all want our kids to be out there playing in the playgrounds and growing up in a balanced way. But I see the technology, on the one hand, as you say, yes, it is a tool, but I also see that it is a ubiquitous part of our environment. In a way, it is a little bit of a mistake just to see it as a tool because it is so deeply embedded in our society and how we go about doing things. So we can all have anxiety about the negative impact of that stuff and that it is going to take our jobs and destroy our kids because they are all going to become fat and all the rest of it. But, meanwhile, we can also notice and see clearly that there is a beneficial thing taking place as well. There are new ways of learning that are happening.

This whole area of self-directed learning is an interesting one for me as well, in that the technology has and does really enable that. As a consequence, it has put pressure on how we are defining the roles of teachers and how we are defining the roles of institutions here, and where that might go. I certainly see that skills around self-directed learning are already deeply embedded in the way that we do things. So when we start looking at things that are right there at the edge of the frontier now, all the artificial intelligence technologies and the internet of things, virtual reality and all these things—robots and drones and what have you—I see an environment where—I have just lost the thread of what I was going to say then. I think you might get where I was heading there.

**The CHAIR:** Just coming back to self-directed learning, have you got any examples of schools in Australia or internationally that have used technology and self-directed learning as a good example of how that gives them those skills and how the teachers transition to that different method of teaching?

**Dr Mason:** Absolutely. I would say many schools do this already. There is a mainstream pedagogy out there that is embedded within the schooling system and all the students here learn about it, called the Five Es, and it is all about engaging and exploring as a first stage of that process, and exploration and inquiry has become really quite important. I cannot highlight any particular schools necessarily there, but I know there is a lot of inquiry based learning, particularly in the STEM area, that is very successful in a lot of schools at the moment.

But just another point on that, I also see, if I can just make a connection with the 21<sup>st</sup> century schools having to be rearticulated, in the area of self-directed learning, I am seeing that there is a shift underway around the importance of problem-solving, moving towards, say, problem designing. So it is flipping things around. Students are not necessarily being given the problems to solve, but they are being immersed into the complexities of the real world and being asked to design problems that might then create solutions.

**The CHAIR:** So that is that blue-sky way of looking at issues. Can you give an example of that, where you have seen that occur?

**Dr Mason:** An example of problem design, of designing a problem?

The CHAIR: Yes.

[11.00 am]

**Dr Mason:** I am trying to think of one at the moment, but I am now also thinking about another technique that I am deeply interested in and I am deeply engaged in. That is all about trying to foster student-centred pedagogy around the area of questioning skills. It is one thing to be good at searching on the internet, but it is another thing to learn how to ask good questions. So, in fact, my whole research agenda is around student questioning and scaffolded student questioning. Any kind of questioning, in fact, because search, as good as it is, it really abbreviates questions and there is a range of questions that search just does not deal with very well yet. In particular, the right questions and that sort of thing. But there is a technique that I use, that I call the question formulation technique, and you can do a quick search on that; you will find information about that. But it is all about shifting where the questions are asked in the classroom from the teacher to the student. I think that is a really important thing to happen, and it is a very empowering thing to happen.

Whenever I work with that technique with my students, I also observe, quite clearly a shift in the way that we engage with each other and I start to see them thinking in questions, and thinking in questions rather than trying to think in answers is a whole different paradigm.

The CHAIR: It is.

**Ms S.E. WINTON:** I just wanted to ask about teacher training, perhaps your experiences at your university. What are your thoughts in terms of are we, in the tertiary sector, providing good training to allow teachers to become good teachers of technology and the changes that are constantly happening?

**Dr Mason:** You are getting a little bit political now, Sabine.

**Ms S.E. WINTON:** Well, no. It is not political because unless you have teachers who are going to be able to be flexible in thinking ways, you are sort of starting at the wrong end.

**Dr Mason:** It is interesting. For as long as I have been involved in educational technology in 40 years, there has been an agenda out there all about professional development for teachers, because there is always this catch-up and there is always this pressure on teachers to be better at this stuff. So I do not particularly want to answer the question of whether we are good at it or not, because I am aware there is lots and lots of politics out there at the moment, there is a lot of beat up about how bad we are in terms of preparing our teachers and all of that. But I do see a really important role for

ongoing professional learning. It just has to be deeply embedded in everything we do. You know, AITSL recognises this in terms of the requirements for existing teachers to ensure that their competencies are current, but I do not know whether I am answering your question. Do you want to ask it another way?

**Ms S.E. WINTON:** Yes, I am just wondering, is it compulsory, as part of teacher training, and to what extent is it, or is it optional in terms of the particular teacher's interest?

**Dr Mason:** No, it is absolutely compulsory because it is part of the AITSL teacher standards. So it is very much embedded in all our courses. It is embedded in the curriculum, so it is there.

Mr W.R. MARMION: Can I just make a comment on that, which is not political: I have five children over a range of ages, and I have to say that my experience of their education, a lot of it does depend on the teacher. So in this highly—by the way, I am an engineer, so I have an interest in this area. Not all my kids do. But I have noticed that if a teacher has a particular interest in digital technology, so do the kids, and they get —

Ms S.E. WINTON: Well, if they are competent. It is not even an interest.

**Mr W.R. MARMION:** Usually, they are. They have got an interest outside the normal curriculum so they have actually advanced further, and this is going back some years. The kids have had the benefit. So I guess the follow-up question is: should teachers be dedicated to this particular area in each school, or should all the teachers have some rudimentary level of ICT capability?

**Dr Mason:** Well, I think there should be a baseline there, for sure. There needs to be capability. Just like in the Australian curriculum, it's a general capability. I think that baseline needs to be there for teachers as well, absolutely. But there is clearly a distinction between teaching with technology and teaching about technology. I kind of think we need to do both, and more comprehensibly.

The CHAIR: What are the barriers to doing it better?

**Dr Mason:** Well, I think there are probably quite a few. I think teacher confidence is one of those things. Even with old hands at this game, you encounter technical glitches all the time. Even this morning, just setting this whole thing up, we had planned to use a video conference link, and there was a glitch so we had to shift our thinking:, "Will we use Skype for Business or Webex?" So we are using Webex. These things happen. So part of my teaching in a technology sphere I teach is all about plan B. There has to be a plan B, always.

**The CHAIR:** It is called pen and paper, I think.

**Dr Mason:** It will bring you undone, sooner or later, in my experience.

**The CHAIR:** Yes. But do you not think, as we move towards more of that smart technology, like smartphones, that it is a bit like what you were saying, it is almost now an integral part of modern day life, like turning the lights on when you walk in during the night, or having a hot water system, sometimes the lights will not work, sometimes the hot water system does not work, but mostly it always does and you do it almost—or you drive your car—intuitively. You place that at the back—you know how to use that; that is a habit forming way of doing things. Is that part of where we are moving to, in terms of what you were saying, it means that we move out of the 21<sup>st</sup> century skills and into, say, actually these are day-to-day skills and what we have to do is learn the ways to use them in a much more thoughtful, meaningful and not trivial way?

**Dr Mason:** Well, in much more of a vigilant way, I think, because in the world of cybercrime and cyberwarfare, it is only going to get more complicated and complex. We are looking at some really sophisticated scenarios coming in and then how we go about engineering or re-engineering the net for the next generation. There is a really prominent initiative in Europe at the moment called NGI, the Next Generation Internet, all around an internet of human values. It is all about re-engineering

the routine stuff that does protect our privacy and our security and helps nurture the stuff that matters to us as a community and socially. I think those things are going to become more prominent, but I think there is going to be some stresses and strains and problems that we have to navigate through before we get to better times with this. I still see that we are in a stage at the moment where, if we think about trust, for example, the trust infrastructure that is going to support better privacy and security and all those things, if we look at trust in society now, it is in decline: we do not trust the churches any more, we do not trust the banks, we do not trust politicians and we are not trusting democracy. It is a concern, and in a digital domain, what is happening in parallel with that is an incredible tribalism that is sort of rampant, in a way. So I am anticipating some kind of recalibration of all that, and I am sure that public policy is going to have to play a part in that as well. [11.10 am]

Mr W.R. MARMION: All these are huge problems that everyone is grappling with. I am looking at us bringing it back to education. For people to solve those problems, do we need to be teaching more children at school to do coding, programming and even running algorithms? It is very complex stuff. I have been advised in some of the lectures I have been to where they are saying there is going to be a shortage of coders and people who can do this worldwide, so there are lots of jobs available. Should our education system be setting up to address that by actually teaching our children to do this; and, if so, do we need to lift our game?

**Dr Mason:** Yes, we need to lift our game on lots of fronts. I think teaching coding definitely has got strong advocacy out there on lots of fronts. There is lots of stuff going on on that front. There is a lot of advocacy around that. I am not totally convinced that coding is at the core here. I think, to use a metaphor, a coder is like a mechanic. To be able to drive a car and drive it well, you do not necessarily need to be a mechanic to do it, but you do need to have an appreciation of some of these things. I think that, certainly, understanding how algorithms work is at least as important as coding. We can learn about that without actually coding, and the issue of bias in algorithms in artificial intelligence systems is a very big issue that we need to confront somehow and find solutions to.

The CHAIR: In terms of areas that we investigate, obviously we look at remote and regional and Aboriginal communities. One of the communities that we also try to look at, in terms of some of our investigations, is around the culturally and linguistically diverse community. Do you believe that, for newly arrived Australians with English as a second language, or kids who come from families that are culturally and linguistically diverse, is there assistance with digital technology, or have you seen digital technology used in terms of being able to assist those sorts of communities, that you are aware of?

**Dr Mason:** I am aware of that taking place, but I do not have firsthand experience in the communities myself, no.

**The CHAIR:** That is good.

Ms S.E. WINTON: Jon, who does digital technologies in their schools well, as a country?

**Dr Mason:** It depends what you mean by "well".

Ms S.E. WINTON: Better than us!

**Dr Mason:** We know there are these international benchmarks out there and PISA. NAPLAN is a process as a consequence of PISA and certain things get benchmarked, so certain countries like Singapore and Finland and Korea come right up to the top. My own experience, because I do a fair bit of travel, is I actually think that what is happening in Korea—South Korea, that is—they have been right on the edge for some years, doing some really interesting stuff there. I know Australia used to be seen as the place that was expert in distance education. We are early adopters of

technology and all that kind of thing. My sense of it is that we are a little bit behind in some respects. I see more activity happening in Europe and certain parts of North Asia, Japan and Korea in particular. Recently, I have been travelling to China a bit. I know that China has been investing heavily in lots of programs around schools of the future, that are getting technology coming out of their ears, really, and investing in artificial intelligence. China has big aspirations to be the absolute leaders in artificial intelligence. It is already integrated into some of the education systems.

**The CHAIR:** In what way? What do they do? What do you mean, in terms of those sorts of schools? Are they technology schools? What sort of stuff do they do? Have they got AI teaching students or assisting or tutoring students?

**Dr Mason:** They have got AI tutoring applications happening, of some prototypes. I have seen examples of them being used in classrooms. China is putting a lot of effort into architecting this stuff in terms of using artificial tutors to assist. It is really interesting. In comparing all the kinds of platforms that are ubiquitous in China, a good example is that in China you cannot use Google and you cannot use Facebook and you cannot use this stuff that we all take for granted, but they have their own basket of applications that they use, and one of these in particular—WeChat—is so ubiquitous and it is so sophisticated. It is used for paying stuff. It is quite extraordinary. Twenty-five years ago, there were lots of bicycles being used and then over the years, you started not to see them anymore and cars everywhere, there is smog everywhere, and in recent years, there are all these smart bicycles around again.

So the people just come up to a bike with their smartphone, unlock it, get on it and ride it to where they want to go. So these kinds of digital services are becoming really enmeshed in the way of life in big Chinese cities. You do not see that in Australia. We see little attempts at trying to do this stuff, but not to the same degree.

**The CHAIR:** Not to the scale. Yes. I am also aware—I do not know if you have spent any time in Indonesia—that Indonesia has one of the biggest uptakes of Facebook in the world and uses that as a —

**Dr Mason:** And WhatsApp. We do a lot of work with Indonesia as well. It is a really interesting thing there, of course too, with South East Asia in particular, but right throughout Asia, culturally, the issue of teacher-centric classrooms is so, so strong. Even though they might have public policy around moving towards student-centred teaching and student-centred environments, the actual practice is still very, very teacher centric and very controlled and very hierarchical. In Indonesia, it is quite interesting to see and find ways in which we can get around that. Indonesia has had an explicit curriculum around moving towards student-centred teaching for nearly eight years. The evidence out there is that hardly anyone is actually trying to make that happen. In Indonesia, it is a teacher professional development issue.

**The CHAIR:** In Korea, you were saying that they do it really well. Are they, in terms of their classrooms, doing it really well or the teachers or their ICT or their teaching? What sorts of things can you take us into, in terms of —

[11.20 am]

**Dr Mason:** I guess my observation there is that Korea was first in the line with ubiquitous wi-fi and in making access readily available. They are also really big on imagination in the entertainment, digital gaming kind of world, in terms of really, really, really catchy, interesting stuff.

**The CHAIR:** Do they do that in the educational space as well, use digital gaming as an educational tool?

**Dr Mason:** Digital is ubiquitous in Korea and it spills over into the entertainment areas very seamlessly.

**The CHAIR:** Everywhere. All right. We have taken up an hour of your time and we also need to wrap it up because we need to get into Parliament. Does anyone else have any questions? Because we are just looking, at this stage, around whether we will do an inquiry, and if we do do an inquiry, what we will do an inquiry into. When you were talking, it is almost like how long is a piece of string-type discussion.

**Dr Mason:** It is, yes.

The CHAIR: So if you were going to take a segment of the string that you think would be worthwhile in terms of us contributing to public policy delivery in Western Australia around either ICT capability or digital technologies or the teaching of either/or, the student directed learning of that—all of those things—what would you say is an area that needs a keen eye of public policy for politicians such as ourselves?

**Dr Mason:** Okay, I will have a stab at it. I would say the "smart" word, even though it has been around for a while, is not a bad target because to unpack and look at what it might mean to the education system going forward. I think the days of the digital revolution of laptop programs and computer rooms and all that sort of stuff, while it is important, I think we have moved beyond that. So anything in the public policy area around the digital environment I think needs to—there needs to be a discernible shift, actually, beyond just digital skilling.

What I was trying to say before when first talking, was that I see a connect there with so many other agendas that are in accord. Yes, if we are talking technology, there is an explicit connector there with the STEM and the STEAM agenda, but I think there is a connector with social and emotional wellbeing and all those other kinds of important areas where public policy needs to be rearticulated and kept fresh.

The CHAIR: Thank you for that. That is really great and I really appreciate being able to talk about this with you. For my own personal interest, I will google Sue Smith and your work on mindfulness. I am participating in Mindful in May, which is an online course that I have done for the last couple of years, so that is quite interesting. Thank you again. Do you have anything you wanted to ask us, or we will just bid you goodbye?

**Dr Mason:** I just want to say thank you for the opportunity to talk with you. It has been an interesting experience for me. I was worried about what I was going to say and what I would likely say before I started, but it has been okay. Thank you for making the conversation easy.

**The CHAIR:** It was a very interesting conversation, so thank you very much and we appreciate your time.

Hearing concluded at 11.24 am