

# **EDUCATION AND HEALTH STANDING COMMITTEE**

**HEARINGS WITH PROFESSOR KLINKEN, AC**



**TRANSCRIPT OF EVIDENCE  
TAKEN AT PERTH  
WEDNESDAY, 11 AUGUST 2021**

**SESSION ONE**

**Members**

**Mr C.J. Tallentire (Chair)  
Ms L.L. Baker (Deputy Chair)  
Mrs L.A. Munday  
Ms C.M. Collins  
Mr K.J.J. Michel**

---

**Hearing commenced at 9.10 am**

**Professor PETER KLINKEN, AC**  
**Chief Scientist, examined:**

**The CHAIR:** Welcome and thank you very much. I will not attempt to speak the Noongar language as well as you, but I will begin by acknowledging the traditional owners of the land that we meet on, the Whadjuk people of the Noongar nation—kaya wanju—and I pay my respects to elders past, present and emerging. On behalf of the committee, thank you so much for making yourself available to speak to us. I am Chris Tallentire, member for Thornlie and Chair of the Education and Health Standing Committee. I am very privileged to have with me Ms Caitlin Collins, member for Hillarys; Mr Kevin Michel, member for Pilbara; our principal research officer, Catie Parsons; our research officer, Rachel Wells; and Wendy Wells from Hansard.

It is important that you understand that any deliberate misleading of this committee may be regarded as contempt of Parliament. Your evidence is protected by parliamentary privilege. However, this privilege does not apply to anything you might say outside of today's proceedings. Before we commence, have you got any questions for us about the process?

**Prof KLINKEN:** I have identified probably half a dozen key areas and I have made some dot points around them. I was wondering if it would be appropriate for me to talk about those and then we can discuss each one of those, perhaps.

**The CHAIR:** That would be great. If you could outline those areas of particular interest to you as some opening remarks and then we can perhaps follow up with the questions.

**Prof KLINKEN:** Kaya.

*[Words spoken in Noongar language.]*

**Prof KLINKEN:** Chris has heard me say that several times: "Big important men and women. Hello everybody. This is the land of the Noongar people, particularly the Whadjuk clan, and I acknowledge their elders, past and present."

Thank you very much for the invitation to be here, Chris. I really appreciate it. I will talk about education today. I will put health to one side, if that is okay. I come at this from a number of perspectives: as Chief Scientist, clearly, but also as an academic who taught at tertiary level but also someone who taught at high school. I have a diploma in education, so I actually did teach. I was a chalkie, so I do have real-life experience around the education sector. For me, this is a period of immense change, and the education sector that has served us incredibly well for 150-odd years is struggling, in my view. This is one of my favourite graphs. You will not be able to read it, unfortunately. Basically, it is saying that when you have an industrial revolution and technology changes, it goes up very quickly. Education lags and, until it actually catches up, society is feeling pain. It is uncomfortable. As technology levels off and education catches up, you go through a period where people go, "Okay. We can see how the tools that we've been given in the education sector allow us to participate in the world that we are inhabiting." You go through that period of prosperity and a sense of calmness, and then the next revolution comes along and education lags. There is this challenge between what Harvard University calls the race between technology and education. If you can bring that closer together, you reduce social pain. You allow that to extend and society really struggles. We are going through the third and fourth industrial revolutions simultaneously right now—probably the fastest period of change in human history. In my view, the education sector

from primary school all the way through to tertiary and VET is struggling to keep up with it, and it is going through very minor incremental changes and not really addressing the challenges that are associated with societal change, and that creates problems. That is just my opening line. Any comment or thoughts on that?

**The CHAIR:** The first thing that comes to mind is: how can we be adapting to it in Western Australia and perhaps putting ourselves ahead of the rest of the world?

**Prof KLINKEN:** That is what I would love to do, to be honest, Chris. It frustrates the heck out of me when I raise—I have been raising this issue for seven years now as Chief Scientist and everywhere I go I feel resistance, particularly at a departmental level where they have to put out the education system. I get that, right; you have to run a system, but if you do not change to meet the needs, you are disadvantaging our citizens of today but also the citizens of the future. That, to me, is a real concern and we need to get that conversation going. You know what, let me show you another figure. This is Australia's scores in PISA. Whether you like PISA scores or not, this is just the reality. In 2003, this is where Australia was ranked for reading, writing and science. You can see that all of them—every one of them—over the last 20 years is trending in the wrong direction. This is money going into the education system, so it is not due to a lack of funding at a national level. Money is going in but we are going backwards according to these criteria. That is an issue where I think we are stuck in an old model and we have not been able to break out of it. This is a crucial time for us to be taking that into consideration. Reasonable proposition so far?

**The CHAIR:** Yes.

**Ms C.M. COLLINS:** Just to comment as a former teacher —

**Prof KLINKEN:** Yes!

**Ms C.M. COLLINS:** As teachers, we are constantly telling the students about this, and as a school we are trying to evolve with the new workplace environments. We are seeing, particularly in Western Australia, more and more things on the mine sites being automated and how to get students to prepare for the new digital age. I think everyone is aware of what is happening out there, but it is just how to apply that in the school setting. I know that in schools now there are classes that did not exist 10 years ago that teach students how to create apps and use 3D printers. They are doing all the tech stuff, but are they the skills that are actually needed in 10 or 20 years' time?

**Prof KLINKEN:** They are clearly some of the skills, in my view, but not across the board. I do not see that being rolled out as widely as I would like. I think there are pockets of where there are some schools—the independent schools that have been created in the public sector have liberated a bunch of forward-thinking principals to say, “You know what? We've got to change and we're going to do it.” If you go to Cecil Andrews, for example, down in Armadale, they have just taken the bull by the horns. They were a school that was about to shut down—a low socio-economic school, really struggling, kids disengaged, parents did not want to have their kids there. Bang! New principal comes in and goes, “Right. We're going to bring this all together. We're going to bring industry in and we're going to bring the community in.” Suddenly, there is this thriving model of a school that really has got twenty-first century skills. If that has worked, why do we not roll it out more broadly? When I say that, the comment I get back is, “But their WACE scores are not going so well.” Seriously? You can find metrics to criticise or is it “statistics, lies and damned lies”? You can use metrics to criticise anything, but here is a model that is actually working. Why do we not embrace it and roll it out more broadly? That might be one solution where you have got examples of where it can work. What can we learn from it? Let us take it out more broadly.

---

It leads me to something that I am seriously concerned about around the haves and the have-nots. I am not worried about the leafy green suburbs; they understand the way the world is going. They are changing to adapt to those circumstances. They are paid a stack of money to teach the kids and they deliver; otherwise, they go out of business—simple as that.

[9.20 am]

My real worry is around the low socio-economic schools where parents have never really been engaged, your peers are not really into it, it is all seen as geeky and nerdy, and you then stretch this umbilical cord between the haves and the have-nots. If you fracture that or you sever that umbilical cord, you have a society that is just broken, and then you have a permanent underclass that can never really recover. In a period like now, where there is just so much change, it worries the heck out of me. If you go back to the first industrial revolution, and I am one of the few people around who actually remembers it—it is a dad joke. Sorry, there was look of horror; you would not think I was 270 years old, would you? If you read the documentaries and the books around all that time, society was going nuts and there were the haves and the have-nots, and it is not too dissimilar now. That point that you are getting out about the skills that are needed now—I am a 58-year-old truckie. I know that automation is coming. What do I do? What is my skillset to allow me to participate in the next series of jobs that are coming on? There is a sense of nervousness there and a sense of “I don’t know where I fit in.” I think we have an absolute responsibility to make sure we bring everyone along, especially in a privileged, wealthy society like what we have got. We cannot leave anyone behind. That is just morally wrong. Sorry, you know what I am like, Chris. I am passionate.

**The CHAIR:** It is a fascinating area, and keeping our society as cohesive as possible is such an important role for any government. How can we show that 58-year-old truck driver that there are opportunities for him getting towards the end of his career, but also for his kids as well?

**Prof KLINKEN:** If we pick the 58-year-old truckie, there should be short little courses in TAFEs or the VET sector or whatever that say to him, “You know what? You can do a little robotics course if that interests you or you can do a little automation course.” In South Metro TAFE, Rio has now got a course in automation. Rio has just flipped it on its head. People were fearful because they think that automation means a loss of jobs, but they are actually saying, “No, no, no. If you do automation, it creates this environment where you can be pulling the joysticks and running a mine over there.” It is almost like a video game where you are doing all this stuff. They have turned that around. It has taken the fear factor out and it is saying here is an opportunity. There needs to be more and more of those micro-credential things and having lifelong learning. I think we can learn from Singapore in that regard. They have insisted that their workforce has to undergo ongoing learning just to keep up with this world that is changing so rapidly. That is a bit of food for thought there. Do you want me to prattle on again?

**The CHAIR:** Yes, that is great.

**Prof KLINKEN:** I think the model of the teacher being the font of all knowledge up the front who presents stuff, and then kids write it down, memorise it and regurgitate it in an exam, is wrong. It is outdated. It worked in a period where you did not have your iPhone and have all the facts at your fingertips. You do not need to spend an inordinate amount of energy trying to memorise things, regurgitate them and then forget them. That is how the exam model works, in my view. There really has to be more emphasis around creativity and problem solving. People call it twenty-first century skills. For crying out loud, we have been doing that forever. I call them core competencies. I call them life skills. These are things that everyone needs. When I talk to people in business and industry, they say that what they want is problem solvers, people who are creative and people who have ideas. What we do is actually force kids not to think. I say that curriculum content can crush curiosity

---

and creativity. You get kids out of primary school where they are little sponges soaking up info. You put them into secondary school and they have to go to chemistry, biology class, this class and that class—bang! They are just bombarded with facts, which they think are immutable, and then they have to regurgitate them. That worked 150 years ago. I do not think that is the right model for this day and age. We need to have that conversation around what is the right model and how do we actually bring that in, and that conversation is not happening in my view. There is so much resistance to that.

**Ms C.M. COLLINS:** Until the exam format is changed, the style of teaching will not change. While there is a handwritten three-hour exam that requires you to write three essays, and you kind of know the topics going in, there will always be that style, which is really unfortunate. The exam itself has to completely change before the teaching can change.

**Prof KLINKEN:** Absolutely. To me, the exam is the driver of behaviour. That is how you are measured. That is how the kids are measured. Therefore, the teachers are measured against how the kids are performing, and therefore the schools are measured on how their kids are performing in those sorts of tests. I not a great fan of the NAPLANs and the PISAs and all that sort of stuff, but at least they give you a bit of an indication of where we are tracking.

I think ATAR, as a system, is broken. I really think it is failing our kids. I think it is failing our entire system, to be perfectly honest. It was used as a mechanism for determining who should go into university. Kids have worked out ways to get around ATAR. Only a third of kids going to university are going through an ATAR route now. What they are doing is they are gaming it. They are taking soft options. Why do hard maths when you can do easy maths and get a higher score? Why do physics when you can do photography? I have heard a guidance officer or careers officer at a school say that. The kids are gaming it, the teachers are gaming it and the schools are gaming it. The schools in particular will actually encourage less able kids not to do ATAR or to take soft options so that the school's rankings look good. That is not in the best interests of the kids or the best interest of our society. The universities are complicit here as well. Their funding model is based on bums on seats at the moment. They will just take whatever is coming through and say, "If you haven't done that course, that's fine, not a problem. You want to do engineering and you haven't got mathematics, you can do a bridging course, but we'll charge you a little bit." All of that is just not good. It needs to be addressed. You can hear grumblings around the traps at the moment but it has not really hit a real crescendo, in my view.

**The CHAIR:** Certainly, that issue around the universities is one that we have received some correspondence on. The lowering of admission standards is how some academics seem to see it. If the students coming in are not being given the chance to really rise to what their capabilities might be, it is hard to make the two connect.

**Prof KLINKEN:** There is a serious disconnect, in my view, and it is not helping us as a society. We are just taking soft options to meet the current conditions that universities find themselves in. I think the ATAR is broken, as I said. We need to find a different model. If you look at ANU and their entry criteria, it is really interesting. They have just come out and said that ATAR is only one third what they are evaluating. One third is on a portfolio of what you do and the other third is based on an interview. You can see that they are gradually pushing that to a side as well. We are not encouraging kids to really push themselves, to challenge themselves. We are encouraging them to take soft options, which is not good.

There are a couple of great reports that have been done: Gonski 2.0 and the Shergold report, which came out a year or two ago—fabulous reports. They really identified issues and came up with practical solutions. As far as I can see they have just gathered dust. It breaks my heart when I think

---

about the amount of effort that goes into this, the amount of thinking, the amount of work to say, “Here’s a way forward”, and then you just get resistance and things do not change—not good enough for our society. The world is changing so rapidly, people are playing leapfrog. They are just going to go past us and we are just going to go, “Oh! What happened there?” It is the old frog in boiling water scenario. Sorry, am I prattling on too much?

**The CHAIR:** No, this is very useful for us, Peter. Thank you.

[9.30 am]

**Prof KLINKEN:** I have whinged about ATAR. Let me talk about STEAM and STEM. As Chief Scientist, you would expect me to be supporting STEM, and as chair of the state STEM committee, yes, I do, but I have absolutely no problems at all with STEAM. As a whole of society, we need to bring all the different bits together. I think we work in silos too much instead of actually unifying things. It worries me that we go into these deep dives without coming back and integrating things better. The arts and humanities are such an important part of society. We ignore them at our peril and I was worried when I heard about UWA reducing their humanities because of financial issues. That is core to being a human. As much as I love science, there is more to life than just science.

If we just talk about STEM for a moment, those skills really are crucial for what is going forward into the future as we go through the third and fourth industrial revolutions. Technology is driving this change; therefore, we need to have the technological skills to make sure that we can participate in this period of rapid change. That is part of it. To me, these are almost like life skills. You have to have them to participate. If you do not have them, you get left behind very quickly. I still struggle with the notion that you can actually have those as optional when I see them as life skills. How can you say STEM is so important, but say, “You choose it if you really want to do it.” English is compulsory in year 11 and year 12; I do not have a problem with that. STEM—science and mathematics—is compulsory up to year 10. How come is it not on the agenda in year 11 and 12? I do not get it. I really do not understand why, if we believe that these are really important life skills, you say to society, “You choose if you want to do it or not.” The ones that are not choosing are from the low socio-economic status areas, the low ICSEA schools, and that is creating this divide. You are stretching that umbilical cord; I do not find that acceptable. I think it is morally wrong. Any comments on that?

**The CHAIR:** I will just go back to your point about the university sector and the decisions around humanities courses. We would be wary of getting into what might be operational decisions whereas there is a state government role in perhaps the governance side of things and the decision-making there. Have you got any comments on that?

**Prof KLINKEN:** I am not sure about how much advice you can provide to the universities, but it goes to the heart of the issue where the humanities are just not as valued and they have been increasingly devalued over the years, not just at UWA but across the board. It takes away part of our humanity and that worries me. While I am a passionate advocate for STEM, I would really hate to see us lose the humanities. Shall we walk about universities?

**The CHAIR:** Sure.

**Prof KLINKEN:** There are four public universities. They are all established under state acts of Parliament. I think there should be a single university of Western Australia or a university of Perth that brings all four universities into one. Each one of them has a burning financial platform right now. Australia has 43 universities for a country of 25 million people. That is extraordinary and not viable. We will see, in the not too distant future, some of these universities closing. If this was a business period, like the global financial crisis, you would say it is a period of mergers and

---

acquisitions—a period of M&As. I think you will find that some universities are going very close to the wall right now. Do not quote me on this one, but—am I being quoted?

**The CHAIR:** You are in *Hansard*.

**Prof KLINKEN:** It will be in *Hansard*, will it?

**The CHAIR:** Yes.

**Prof KLINKEN:** There are universities here in WA that are really struggling. For the good of our society, I think we need to make sure that this sector remains viable. I think the best option is to combine all of them into one. If you look at international rankings as a measure of how universities are travelling, UWA is ranked in the mid 80s according to the ARWU. Curtin is in the 200s and then Murdoch and ECU are in the 500 to 600 range. Preliminary analyses that I have seen suggest that if you combine them all into one university, it would go into the top 40 or 50 in the world and that would then provide you with great marketing tool: “Come to WA. We’re a top 40 or top 50 university in the world.” It would take us close to being the highest ranked university in the country and it would provide serious scale. When I say there is an opportunity to do a merger amalgamation, this is not just a crazy Chief Scientist talking about it. I might be crazy, but there are other people considering these ideas as well. In South Australia they are currently looking at merging their three universities—Adelaide, UniSA and Flinders. When they did their analyses, they found that there was marginal improvement because one of them was so far out that it did not really affect the overall rankings so much. This is happening at a global level. If you look at the University of Manchester and another Manchester institute, they came together to compete with Oxford and Cambridge and the London universities. By combining, they got scale, they are the third-ranked university in the UK now and they are in the mid 30s globally. In Denmark, they combined 12 universities into eight. University of Copenhagen is in the top 30. In Paris, they combined 20 institutions into one. They call it Université Paris-Saclay and that ranks 14 in the world.

These amalgamations are happening globally; it is not just me being crazy and suggesting this is something that we should be doing only in WA. You will find other places doing it and if we are not aware of what is going on, we are likely to be left behind, especially at a time when we have no international students coming in and the viability of our universities is all at stake. International students are crucial sources of income for universities. That income drives the universities’ activities, but, very importantly, helps to cover the costs for research and that is what rankings are based on; your research capabilities determine your rankings. If you secure a grant from a federal government agency—the ARC or NHMRC or whatever—they probably pay 50 to 60 per cent of the cost of the research. They allow that project to happen, but the infrastructure and everything else to do the project has to be managed by the university. They then have to supplement the research activity income from teaching income and international students. If you have good rankings, students come to you. That covers your research, therefore you get better rankings and therefore you get more students; it is a virtuous circle going forward. If you cut the students, you have less money to go into research, your research rankings go down, your international rankings go down, students are less likely to come and see you, therefore you have less money, you do less research and you go through a death spiral. It is a crucial time for our universities right now. They are so important to the future of our society. It is not just around educating our community; it is about international relations and international income. WA gets about \$2 billion a year from international students. That has essentially been cut. That is a hit to our budget right now. It also reduces the diversification of our economy. At a national level, education was bringing in pre-COVID \$20 billion to \$30 billion a year, which is the third highest earner after coal and iron ore. It is a sector that we are really good at. We

---

have six universities in Australia in the top 100 in the world. Only America, which has 49, and UK, which has nine, have more universities in the top 100 in the world.

**Prof KLINKEN:** It is something we are really good at but it is now in peril because that business model is really being challenged through international students.

[9.40 am]

**The CHAIR:** Through the loss of international students, and there is a tendency to be going online more as well?

**Prof KLINKEN:** Correct. MOOCs, massive open online courses. If you were a student who wanted to go online, where would you choose to go online? You find a course that is of interest to you—number one. Then if I were a student I would be going, “What’s the course that’s been produced by a university that’s got the highest international ranking?” because that would make me look the best. If the Harvards, the Yales, the Cambridges—all of those places—are doing a similar course as, let’s say, Murdoch University, as a student I would be looking seriously at them. There might be a difference in price, you would have to work that out. International rankings are going to be important. If you do not have face-to-face teaching in our current scenario and it is going to be online, rankings are going to be critical in determining how students make that choice. We are at a point where, I think, we have to look seriously at amalgamating our universities, bringing them together, presenting a cohesive view of WA and saying, “You know what? We should be seen as University City.” We should be presenting ourselves as an education state. You look at Victoria’s numberplates, what have they got at the bottom? “Education state.” They are very proud of that because they do not have resources and they have to use what is between their ears. We do not have a narrative in WA around the smart, sophisticated stuff that we do, which includes our education sector. We have a really good education sector; it should be great and we need to be moving in that direction.

**Ms C.M. COLLINS:** Do you think at least COVID has prevented somewhat of a brain drain from Western Australia? A lot of the people who may have gone to Cambridge or Yale to study have now chosen to stay here?

**Prof KLINKEN:** I would say it is probably the converse, where Western Australians who have been expats have gone, “I want to come home” and they want to come home quicker. I know; I was an expat for a while. I was living in the States. I always knew I wanted to come back to Australia, particularly WA—family, great place to live, great place to bring up your kids, but you have got to feel confident that your career is going to take off. I think there is this massive opportunity now, particularly because we are COVID-safe, but also because of the ability to do business online. You can just get on a Teams or a Zoom meeting and you are connected. I think COVID has just allowed that to happen much more quickly. I know people who have come to WA and basically set up shop here because they think it is just the best place, it is safe and they can do business.

One example—going slightly on a tangent here—is a financier out of New York who was travelling through Singapore thought, “Great place, I’ll set up business here”, set up shop and had his family there, then came to WA for a holiday on the Friday before we shut down. He landed in Yallingup with two suitcases and three kids and went, “Oh my God, what are we going to do? We can’t get back to Singapore” blah, blah, blah, realised what a great place it was here, got onto Zoom, Teams meetings, did his business from here. He is now a permanent resident and he lives in Margaret River. He has set up a global venture capital business here in Margaret River because he loves it here. I would love to see us taking advantage of that, saying, “Safe, secure, great place to live, wonderful for kids, by the way you can connect anywhere in the world right here right now and we’re in the

---



same time zone as 60 per cent of the world's population". It is such a massive opportunity. We should be screaming that from the rooftops.

**The CHAIR:** Just to pick up on two points. We have had over the last, say, 30 years a couple of merger attempts.

**Prof KLINKEN:** Yes.

**The CHAIR:** They have gone nowhere. I think one was Murdoch and UWA, and then another was Curtin and Murdoch?

**Prof KLINKEN:** Correct, yes.

**The CHAIR:** How do we —

**Prof KLINKEN:** Get around those?

**The CHAIR:** Yes.

**Prof KLINKEN:** Yes, the first one, Murdoch and UWA, my recollection of the time is it failed by a single vote in the upper house. It actually got to that point. The second merger really came down to personalities and the vice chancellors and who was going to run the combined university, so that did not go ahead. I think now is the time for a much more mature conversation. I think the universities here in Perth have been so focused on internecine warfare that they feel the competition is local, not global. We are playing in a global field; we should not be squabbling amongst ourselves and wasting our energy, in my view. This is a moment when we should be having a serious conversation saying, "What is in the best interest of our state?"—not just our institution—"What is in the best interest of our state? What is in the best interest of our community?" and lift the conversation to say, "How can we do this better?" I think it will require some degree of leadership and evidence. If you can demonstrate that a combined university is going to have a higher ranking, you are going to attract more students and you are also going to attract more high-calibre staff. If you want high-calibre people—university academics and researchers—they are more likely to come to a top 50 university than a top 500 university. So I think there is this opportunity to have a serious conversation around that right now.

**The CHAIR:** Just going to the specific area of medical research and noting your background, the leadership role you played in establishing Harry Perkins, what is the relationship between our universities and fabulous institutions like Harry Perkins and other —

**Prof KLINKEN:** Telethon Kids and so on?

**The CHAIR:** Yes.

**Prof KLINKEN:** Each one of the medical research institutions are independent entities, but they have affiliation agreements with universities, so they work very closely together and in a way they are complementary. The advantage of a medical research institute is that it focuses on research, it does very little teaching apart from postgraduate teaching, therefore it can be really, really useful to a university because it improves the ranking. Perkins is affiliated with UWA and all the publications that come out of Perkins are recorded as UWA's on the international rankings, so UWA go, "Ooh, thank you, let's have that affiliation, that will improve us". Likewise other institutions affiliated with Curtin—the publications that come out of them, which are important for rankings, are accredited to Curtin. You need to have a close alignment between the institution and the university sector.

The other advantage that I see is that the medical research institutions can attract philanthropic money. Let's say you're doing cancer research. People go, "You're doing cancer? Right, we'll put money here" as distinct from going into a large amorphous entity like a university. It can tap into other sources of funding as well. Does that make sense?

---

**The CHAIR:** Yes, yes, thank you. Did you have further areas that you wanted to specifically raise with us, Peter?

**Prof KLINKEN:** A couple of others, just very quickly. One is around Indigenous culture. As you might have picked up, I am very passionate about that. I think it should be mandatory in all primary schools that our kids are taught some language that is appropriate to that particular region and be taught some Aboriginal culture. If you want a cohesive society, you understand where different cultures come from. We have one of the most remarkable multicultural societies on the planet. I would love to see us respecting Aboriginal culture which has been here for 60, 65 000 years and to see that as part of the norm. I would encourage education departments to really ramp up that—what is the word I am looking for—integration, assimilation, whatever—not assimilation—a valuing of Aboriginal culture because, my God, there are so many things we can learn from them. They lived here for 65 000 years in a way that was highly sustainable. There are lots of things we can learn from that. Sorry.

**Ms C.M. COLLINS:** Have you seen an improvement in that space? I know when I went to primary school here I had no teaching about Aboriginal culture until I started studying history later at university.

**Prof KLINKEN:** Yes. So you are a humanities —

**Ms C.M. COLLINS:** Yes, humanities.

**Prof KLINKEN:** You didn't mind my comments about the humanities then?

[9.50 am]

**Ms C.M. COLLINS:** I appreciate that you, as a scientist, see the merits of humanities.

**Prof KLINKEN:** Totally.

**Ms C.M. COLLINS:** I think, certainly, now when I go in my role as an MP to various primary schools in the electorate, they have got Indigenous art around the place, and they are trying to integrate the language into their house names. I have seen an improvement. I guess it would be good to understand how to make it even better in future—whether it should be a subject allocation or whether—

**Prof KLINKEN:** I think the more we can bring it together, the better. I was at Thornlie Senior High School yesterday for their NAIDOC Week ceremony, and it was fabulous to see an elder welcoming everyone to country and talking about the challenges over the last 200 years but saying, “We need to walk together. Danjoo koorliny. We are walking together.”

I think you are absolutely right that there has been a change in the conversation. It is much more mature and much better. There is a greater respect that is out there, but it still can keep going. It is very easy for those sorts of things to fall apart if you do not keep at it. I would just encourage continual engagement—continual, continual, continual—so that everyone sees this as a wonderful, normal, cohesive society. It is about mutual respect. It is saying, “You know what? You have been here for 60 000 years; you bring a lot to the table. We have come in for 200; this is what we bring to the table. What we both bring together to go to the future.” I say that WA is this incredible place where ancient meets modern, and we can go to the future together.

**The CHAIR:** Were there further areas you wanted to raise with us, Peter, because we have got some questions about some specific things?

**Prof KLINKEN:** Oh, God. Sorry. My apologies.

**The CHAIR:** It has been incredibly useful, and we are very appreciative.

---

**Prof KLINKEN:** Let me stop prattling, and then you quiz me. If there are things I feel I would like to cover, I will come back to them.

**The CHAIR:** Okay. We might do these in a fairly quickfire way. My first question to you is about the state government role and how you have assisted state government as Chief Scientist to respond to the COVID-19 pandemic.

**Prof KLINKEN:** I was not initially heavily involved. The health department handled that. It was the first Friday in March last year. I was down at my place in Margaret River, in Wardandi boodja. I was just getting inundated with phone messages, text messages, LinkedIn messages from people I did not know, saying, “COVID is coming. We have just seen what is happening in Italy. We have seen what is happening in Spain. What can we do to help?”

I rang Roger Cook the next day and said, “Look, all these people are getting in touch with me. What do we need?” He said, “I am not sure. Talk to David Russell-Weisz, the DG of Health.” I rang Russ on Sunday, and he said, “We need PPE. We need sanitisers. We need swabs, and we need ventilators.” Bang. Clear, right? I sent an email back to all the people who got in touch with me. By Monday afternoon, they had made the first PPE. Factories in Malaga stopped everything and started making face shields. On Tuesday, I was able to take them into the health department and say, “What do you think?” They said they were better than what they had. They were able to mass-produce them. We then had four companies saying, “We have gone online, and we think we can make ventilators.” Great. Off they went and made these ventilators. They were not ICU quality, but they would have kept people alive had they developed COVID. When they did not have parts, someone said, “Hey, that part over there, just come over to my place, and we will 3D print it for you.” To see society and community coming together in a moment of crisis was uplifting. It was great to see the capability that we had to address serious issues. We can address supply-chain issues, and we can produce incredible things.

It worries me that we have reduced our manufacturing capability and that Australia now is ranked about 90 in the world for our export complexity. We are somewhere between Uganda and Burkina Faso. You just shake your head and go, “Seriously?” We are so reliant on our resources, and if we allow our manufacturing sector to become even more undermined, we will not be able to do the ventilators, the PPE and all that sort of stuff. Ninety-five per cent of our medicines are imported. Had COVID continued as it was, we could not get antibiotics into Australia; therefore, you could not go to the dentist. You could not do surgery because you have got no antibiotics to kill the bacterial infections. That is how serious it is. We need to have sovereign capability. We cannot do everything, but we need sovereign capability.

Sorry. Was that an education question?

**The CHAIR:** Education and health—it all crosses over. That is fine.

Caitlin, we will go on to your question, I think.

**Ms C.M. COLLINS:** The state budget papers, 2020–21, under science and innovation, referred to the key role that universities and other research institutions played in responding to COVID-19. We understand that the Department of Jobs, Tourism, Science and Innovation provided a grant of up to \$5 million to the university sector for targeted research projects in this area. Are you aware of what types of medical research have been undertaken in this area, and can you please elaborate on what they were?

**Prof KLINKEN:** Yes, I can.

**Ms C.M. COLLINS:** Thanks.

---

**Prof KLINKEN:** It was a Thursday. I remember it clearly. It was the first Thursday of lockdown, and I got a call from the Treasurer. “Peter, it’s Ben here.” “Hey, Ben, how are you going?” “We have got COVID coming. Do you think the universities could help us in this?” I said, “I am sure they can.” He said, “You have got 24 hours. I have got X amount of dollars to put aside to see if the universities can assist.” I got in touch with each one of the universities—with the vice-chancellors and the deputy vice-chancellors of research—and said you have got 24 hours to give me your best six projects that will assist in COVID.

Ben rang me the following Friday afternoon. We had 36 projects lined up. Some of these are university specific, where they have got real capability; others are across the board: Aboriginal health, mental health, data analytics. Let us get the universities to work together, all of them together. Here is a pot of money. You all work together, solve the problem. There was an allocation of \$5 million that went to that. I oversaw it, and I am continuing to oversee it. I meet—by Teams or Zoom or whatever—with the universities every three months to monitor progress on each of these projects.

It is a fabulous example of a different approach to research, saying, “We have got a problem. Help us solve it.” Instead of saying, “We have got some money. Give us your best ideas.” “Society needs you. The community needs you. We have got some money to put to this. How can you help us?” The research community just went “bang”. It was fabulous. It was probably one of the most exciting 24 hours of my research career to get five universities around a virtual table to say, “Right. This is the way we are going, guys.” Fabulous. It was great leadership by Ben to say this is where we want go, and these guys just coming in: “Yes. Right. We are right behind you.” It was cool.

I see this, then, as a potential model to go forward. What are the big challenges that we have facing the state? To me, the biggest challenge coming up now is around energy transition. We are going from fossil fuels towards renewables. How do we do that in an orderly, systematic way that makes us the world leader? “Guys, this is what we have got to do. Come in behind us.” Instead of going, “Ah, we have got some money. You guys are doing a bit of renewables over there, a bit of hydrogen here.” Let us just coalesce our capability instead of having it sort of popping up, if that makes sense.

**Ms C.M. COLLINS:** Yes, absolutely.

**Mr K.J.J. MICHEL:** Peter, as a member of the Future Health Research and Innovation Fund Advisory Council, what are the priorities and aims of the future health research and innovation fund? Can you also tell me what they are undertaking and their priorities at the moment?

[10.00 am]

**Prof KLINKEN:** If I can be blunt, I am not sure what the actual priorities are. There has not been an awful lot of money that has actually gone into the future health research and innovation fund so far. I know that that will increase down the track. I am just trying to be careful with my words here. I am concerned that a lot of the use of those funds will be to support Department of Health core business, but I do not think that is appropriate.

**Mr K.J.J. MICHEL:** Is there a levy from the mining royalties that goes into it?

**Prof KLINKEN:** I think that the Department of Health spends \$18 to \$20 million on research. I am seriously concerned that it is going to take that out of this future health fund. I do not think that would be appropriate. I think this fund was to be on top of the current allocation. It would really weaken what the future health fund could do if there was a transfer of funds into the department for that, in my view. The things that I have heard around how the fund could operate is a call for expressions of interest around, “Here’s a pot of money; give us your best ideas”—that ancient model—instead of saying what are the key things this state needs, such as Aboriginal health in

hearing or something like that, whatever it might be, and saying, “We want you to apply for a specific area”, instead of making it open slather. I would like to see a different way of thinking for the future health fund.

It is also called the future health research and innovation fund. Innovation is not part of the health department’s DNA. Health, by its nature, is risk averse. It has to make sure that you do not do harm. The mindset of the health department is look after people; do not take risks. Innovation is all about taking risks and having a punt, and some of them fail and what have you. In a health system, you cannot afford to say, “Eight out of 10 of our patients survived because we did some risky new thing.” No, that is not good enough. If we look at innovation, two out of 10 companies might survive but they will be fantastic. I think that innovation aspect is a real challenge for the Department of Health and probably should be done more closely with JTSI because that is part of its DNA. I think there is a structural issue that needs to be addressed.

**Mr K.J.J. MICHEL:** But is there not a strategy for the 2020–22 research and innovation fund?

**Prof KLINKEN:** It says it is a research and innovation fund.

**Mr K.J.J. MICHEL:** No, but is there a strategy over there?

**Prof KLINKEN:** I think they are still trying to come to terms with that. I have not seen a clear strategy. I know that there have been conversations around which way to go. One of the things that I do like is the idea of having a competition and saying, “What is one really big problem that WA has got?” and opening it up to a competition and saying, “Give us your best ideas. Who can try and solve this?”, and even bring in people from overseas into that. It is a different way of thinking. Have you got a watch on your hand at the moment?

**Mr K.J.J. MICHEL:** Yes.

**Prof KLINKEN:** Do you know what watches were called originally?

**Mr K.J.J. MICHEL:** No.

**Prof KLINKEN:** Chronometers.

**Mr K.J.J. MICHEL:** Oh yes.

**Prof KLINKEN:** And why were chronometers introduced? They were introduced by the British because their fleet could not work out longitude and so they sailed into wrong areas. They needed to know exactly the times, so they had a competition asking if someone could come up with a device that can actually measure time, and out of that we got watches. Competitions are not a bad way to focus people’s minds and to come up with all sorts of different ways of thinking. That is one of the things that I know that the future health research and innovation fund is looking at. The advisory committee is enthusiastic about it. I think it is challenging for the department to come to terms with that because it is a very different model.

**The CHAIR:** Peter, just switching to another area: your chairing of the Healthway board. I do not think we gave you any notice about this.

**Prof KLINKEN:** No, but go for it.

**The CHAIR:** I was just a little concerned to see that in the 2019–20 annual report, the grants for increasing physical activity were the lowest of the strategic priority areas—only two per cent of funded grants against a target of 10 per cent. Is there a reason for that do you think?

**Prof KLINKEN:** That is a really good question. I suspect it probably came out as a result of COVID. During COVID, both Lotterywest and Healthway had to reprioritise all of their activities to what was doable in that time. One of the problems was that it was really hard to get kids to go out and play

---

sport. Physical activity, as a result, probably suffered in that regard, Chris. I am a passionate advocate for physical activity, as you are probably aware, and it is so, so important for obesity, mental health and all of those things. I think that it is just an anomaly but thank you for raising it.

**Ms C.M. COLLINS:** In your experience as the Chief Scientist and a leading medical research scientist, what more could be done to increase WA's standing as a national and global leader in medical research?

**Prof KLINKEN:** Excellence, excellence and excellence—apart from that, nothing much. How do you get to excellence? Bright people come up with bright ideas. How do you attract and retain bright people? You provide them with an environment that is necessary for them to be successful. I set up what is now the Perkins institute. It was called WAIMR—Western Australian Institute for Medical Research—20-odd years ago with the goal of providing a facility where researchers would have a safe, secure environment that provided them with safety nets and protection, because it is a very challenging career. It would provide them with the tools necessary to enable them to do their work. If you have old-fashioned equipment, you cannot be competitive at an international level, and everyone is a player on the international stage. You need funding to have nice facilities where they can do their work, but also the equipment, the data and all those sorts of things that enable them to do their work. Once you have got those in place, then people go, “Aha! You've got that, that and that. Perth is a great place to live, why wouldn't I want to be there?” Once again, if we get back to saying you are linked in with a top 50 university in the world—man, this would be ideal! It is about getting talent, but providing the infrastructure and the capability around people so that their careers can take off. Does that make sense?

**Ms C.M. COLLINS:** Absolutely. We understand that state and local governments provide a portion of funding for research to Western Australian universities. In 2019, it was about 12.2 per cent. How is this administered? Is it through the minister of science or through specific portfolios?

**Prof KLINKEN:** That is a question you probably should ask of government. My role as Chief Scientist is to advise government. I am not empowered to get involved in the actual day-to-day allocation and administration of grants. All I can say is that the more funding you put towards these areas, the better the outcome. It is called a return on investment. All the ROI analyses that I have seen show that for every dollar you put into research, you get between a \$5 and \$10 return. It is an investment for the future. I do not like the notion that this is seen as a black hole where money goes in and disappears and you get no return on it. I think that is just such wrong thinking.

**Ms C.M. COLLINS:** Do you know how much of that allocated funding is specifically for medical research?

**Prof KLINKEN:** No, I do not. Out of the Department of Health, something like \$18 to \$20 million is apparently available to support medical research. We now have the future health and innovation fund, which is likely to get up into the \$30 to \$40 million range. You have Healthway, which is a \$20 million fund. These are not insignificant amounts of money, but it is really important that each of those entities interacts so that we are getting the best bang for our buck and we do not get double dipping and people having a crack here and there. There needs to be some clarity around how our funding is administered.

**The CHAIR:** Now to our final question, which is one you have already answered in many ways, about enhancing the research capacity of the Western Australian university sector. Do you have any more thoughts on that or do you want to elaborate any further on that?

[10.10 am]

---

**Prof KLINKEN:** I see our universities having what they call a comprehensive approach. They cover the waterfront. I think if you had a single university of WA, you could have comprehensive, but you could have pockets of excellence. For example, ECU would be the cyber centre. Murdoch could be the vet and ag centre. UWA could be the biomedical centre. Curtin could be doing the mining sector. If you have centres of excellence, you get an international spotlight shone on you and people go, "Oh! I didn't know that!" Suddenly, it elevates things. If you look at marine biology, for example, each one of our universities teaches marine biology. Each one of them is suboptimal. There are between two and five academics teaching marine biology in each of our marine biology courses. Bring them all together and you have 25 academics who could produce a course which would be globally significant instead of just taking a vegemite approach, which is to spread it thin.

**The CHAIR:** You have made your point very well about the ideal situation being that central, single university of Perth or whatever it might be called, but is that the role of government to drive that? I think of another example where a previous government wanted to drive the merger of local governments—it did not go well.

**Prof KLINKEN:** I hear that. I am quite happy to be the target. I have been talking about this for seven years. I am not shying away from it. The university sector says to me, behind closed doors, "Okay, that's not a bad idea, but we can't be seen to be driving it because we don't want to look like we're taking over." Then we have exactly the comment that you just made where governments say, "We don't really want to be seen to be doing stuff like bringing local governments together and having that." I can understand both sides of that, but, at the end of the day, what is in the best interests of WA and who is going to drive that? I am happy to put my hand up and say that if you guys want to shoot arrows at me, that is fine—not a problem. I want the evidence that says this is a worthwhile thing to do, and I want to have a mature conversation that asks if this good for WA. If it is, great! Let us have a crack at it. My instincts tell me that it is. But I would like to get more evidence around it. I am happy to be the person who can promulgate it and bring the various groups together and say, "Let's talk about this." If government is cautious and universities are cautious, I am prepared to take the risk.

**The CHAIR:** Peter, thank you very much. It is a real honour to have you here. Your knowledge, your contributions, your passion and your enthusiasm is brilliant, so thank you. Thank you for your evidence before the committee today. A transcript of this hearing will be forwarded to you for correction of transcribing errors only.

**Prof KLINKEN:** I did not swear at all, did I?

**The CHAIR:** No.

**Prof KLINKEN:** That was good.

**The CHAIR:** Any such corrections must be made and the transcript returned within 10 working days from the date of the email attached to the transcript. If the transcript is not returned within this period, it will be deemed to be correct. New material cannot be added via these corrections and the sense of your evidence cannot be altered. If you wish to provide clarifying information or elaborate on your evidence, please provide this in an email for consideration by the committee when you return your corrected transcript of evidence. Thank you very much.

**Prof KLINKEN:** Can I make one last point?

**The CHAIR:** Sure.

**Prof KLINKEN:** The decisions we make now are binary. We are the best-placed jurisdiction in the world to go forward. The cards in front of us are remarkable. If we are playing an international game of poker, we have just pulled up our cards and we have two or three aces. I am really worried that

we will say, “Oh, that’s too risky; we’re going to fold.” Then some country over here with a pair of twos goes, “We’ll have a crack at that”, and they leapfrog us. If we stick to business as usual, this state and this country goes backwards. The decisions are binary. There is no dimmer switch anymore; it is either on or off. We accept what we have got, we grasp the opportunities and we go forward. Business as usual is not good for our kids, our grand kids or their kids, and that unacceptable. On that note, I will stop preaching.

**The CHAIR:** Thank you.

**Hearing concluded at 10.15 am**

---