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Official Committee Hansard

**HOUSE OF  
REPRESENTATIVES**

STANDING COMMITTEE ON INDUSTRY, SCIENCE AND  
INNOVATION

**Reference: Research training and workforce issues in Australian universities**

TUESDAY, 19 AUGUST 2008

TOWNSVILLE

BY AUTHORITY OF THE HOUSE OF REPRESENTATIVES



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**HOUSE OF REPRESENTATIVES**  
**STANDING COMMITTEE ON INDUSTRY, SCIENCE AND INNOVATION**

**Tuesday, 19 August 2008**

**Members:** Ms Vamvakinou (*Chair*), Fran Bailey (*Deputy Chair*), Mr Bidgood, Mr Champion, Mr Cheeseman, Dr Jensen, Mr Johnson, Mr Ramsey, Ms Rishworth, Mr Symon

**Members in attendance:** Fran Bailey, Dr Jensen, Mr Ramsey, Mr Symon and Ms Vamvakinou

**Terms of reference for the inquiry:**

To inquire into and report on:

1. The contribution that Australian universities make to research in Australia, including:
  - The contribution of research training programs to Australia's competitiveness in the areas of science, research and innovation;
  - The effectiveness of current Commonwealth research training schemes; and
  - The adequacy of current research training schemes to support Australia's anticipated future requirements for tertiary-qualified professionals in a wide range of disciplines.
2. The challenges Australian universities face in training, recruiting and retaining high quality research graduates and staff, including, but not limited to:
  - Adequacy of training and support (including income support) available to research graduates in Australia;
  - Factors for graduates that determine pursuit of a career in research;
  - Opportunities for career advancement for research graduates and staff;
  - Factors determining pursuit of research opportunities overseas;
  - Australia's ability to compete internationally for high quality researchers; and
  - Whether Australia's academic workforce is ageing, and the impact this may have on Australia's research capacity.

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**Committee met at 8.37 am****VIETH, Associate Professor Errol John, Vice-President, Central Queensland University Branch, National Tertiary Education Union**

**CHAIR (Ms Vamvakinou)**—I declare open this public hearing for the inquiry into research training in Australia being conducted by the House of Representatives Standing Committee on Industry, Science and Innovation. The inquiry arises from a request to this committee by Senator the Hon. Kim Carr, the federal Minister for Innovation, Industry, Science and Research. Written submissions were called for, and 104 have been received to date. The committee is now conducting a program of public hearings and inspections. This hearing is the eighth for the inquiry.

I now call the representative of the Central Queensland University branch of the National Tertiary Education Union to give evidence. Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of the parliament. Consequently they warrant the same respect as proceedings of the House itself. It is customary to remind witnesses that giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. We thank you for your submission and now welcome you to make a brief opening statement before we proceed to questions.

**Prof. Vieth**—A five-minute statement is very difficult. First of all, I am from the humanities, and I am appearing here to represent the NTEU branch. I suppose one of my problems is that research is often seen to be something that is only attached to innovation in science. In regional universities that is not very helpful in terms of research capacity, because much of the research that happens in regional universities is not the large-scale research that is required for bodies like innovation committees.

So, with that in mind, the academic workforce for research training is diminishing. Replacements for that academic workforce should comprise the best scholars that we have. There are fewer students in regional universities, but the financial pressures on those universities—which may be either self-induced through bad management, or politically motivated—mean reductions in staff, therefore increasing staff to student ratios, and therefore, more classes. To have viable programs in regional universities, you need to have more than one academic in that particular discipline. Thus, one or two historians do not provide a critical mass.

Why should regional higher degree students be at a disadvantage? Access to research higher degrees should be available to anybody who has the skills and the capacity to do that, no matter where they come from. We have stupid rules, like 25 being the age of independence, so that students cannot access government funds. The funding that is attached to research higher degrees drives students' work, rather than the notion of inquiry. Research, after all, is basically inquiry—finding out what goes on. It is not attached only to large-scale projects. Those students are viewed by the management of the university as financial assets for three years. After that, they are viewed as liabilities, and they are treated in that way once their three years is up. Their research is no longer going to bring in any funds to the university or the funds diminish and those students are treated as liabilities. Their research is not important; it is the money that is brought into the university by those students that is regarded as being important. The funding structures that apply to those research higher degree students are what causes that problem.

Given the three-one-three model of tertiary education; that is, a bachelor's degree, honours, and—possibly—a PhD, students are not very mature by the time they get to do a PhD. In many cases, it takes longer than three years to do that degree. If the Bologna model was introduced of three-two-three; that is, three years of bachelor's degree, two years of master's degree—which would include research training, obviously—and then three years of a PhD, it would, perhaps, alleviate some of those problems.

First of all, someone needs to look at the term 'research'—what we mean by that. The way that it is talked about in this country is that research is understood by everybody to mean the same thing—but it does not. There is no concise definition of what research means. This committee, for example, is the Industry, Science and Innovation committee: it looks at research, but there is other research that occurs outside that area. The research paradigm seems to be that of science, which comprises large teams, big labs, big funding, big infrastructure, and this thing called 'collaboration'—and that is a very nefarious term.

Much of that research has little to do with local communities. The Bradley review discussion papers give opposing views of research. In fact, it is interesting to look at two of them: one is that universities are a vital link in the innovation system in local and regional communities—and they are. Opposed to that is the notion that research funding can demonstrate both high performance in research and a research operation of a scale which is competitive in an international context. This is obviously opposed to one that has relevance to a local particular community.

Unfortunately, the fact that large, metropolitan universities can gather lots of people together means that—even in the humanities—there is a problem. For example, if I take a recent study of community radio in Australia done by Griffith University in Queensland, it had a team of people from Griffith University looking at community radio influences—mostly in regional communities. That is one element: we can look at issues to do with Woorabinda, which is outside Rockhampton. There seems to be no funding for researching Aboriginal youth in regional areas—which, I suggest, is mainly where the problems are.

Twenty-five percent of state government research funding grants goes to Charles Darwin University. The possible suggestion might be that 50 per cent of state government funding or Commonwealth funding that is to do with regional areas go to regional universities. In that way, it would develop the capacity of regional universities to do research. Regional universities are important to regional communities. People in them can do research. We have a team in Bundaberg, the Bundaberg Media Research Group, that receives funding from the National Library, for example, to do local soundscapes which are disappearing and industrial soundscapes, such as sugar mills. The capacity is there and the willingness is there to do those kinds of things, but it does need some support from government and a shifting of priorities. Because most of the research in those universities is smaller in scale, it does not require the huge funding that is required to make us internationally competitive. Thank you.

**CHAIR**—Thank you. You have obviously touched on an interesting issue: the definition of research and what it means. You have made some very good points about research students in regional universities being seen as a commodity or financial source, meaning, of course, that the research work that they are doing has less value than the fact that they can produce some funding for a period of time. Is this attitude widespread? We seem to be talking about two different types

of attitudes to research at universities. One is that the student is the funding source for the university. Then there are other forms of research, which are seen to be more valuable—the ones that actually get out into the market, that are innovation for sake of the economy. Can I have your thoughts on that?

**Prof. Vieth**—I am not sure that you said anything that I can disagree with, in the sense that—

**CHAIR**—I understand that. I just wonder whether that is widespread or whether it is just an attitude or view that only you or a couple of others have. How widely held is this view?

**Prof. Vieth**—I think it is very widely held. I think the finances of universities are so tight—or at least they are constructed as being tight—that any students that they can get, whether they be postgraduate or undergraduate, are seen to be assets. The research of those students may or may not be important to large research projects that do occur; they are simply seen as being of financial benefit. I think that is widespread.

**CHAIR**—So, research for the sake of linkage into community and for the purposes of community development does not seem to be a priority.

**Prof. Vieth**—Only insofar as it brings money into the university in some way, whether it be through students or through some other grants.

**CHAIR**—Are students in regional universities looked upon as perhaps second- or third-rate academic students? I would like you to also comment on the issue of limited academic freedom. I found that interesting.

**Prof. Vieth**—I think regional universities are often regarded as second-rate institutions, whether their students come from them or not. That is a really interesting one. They are regarded by some of our cousin universities, the metropolitan universities, in that way, but individual scholars may or may not be. For example, I have written three books that have been published internationally and I work in a regional university. So, individually, that may not be the case. Our higher degree research students are examined by other academics in other institutions. I have two being examined as we speak. They are being examined internationally and nationally. So, the PhDs that come out of our regional universities are no less than anywhere else, but there is a perception that in some way what we do is less than what other people do. In some ways they are right, because in a regional university you do not have access to the same sorts of resources that you may have in a large university—although that is changing because of electronic databases and whatever.

**CHAIR**—In what sense is there limited academic freedom? Do you have examples of that? I am mindful of a professor that we met at Flinders University who came to Flinders from Germany. I asked him why he came here and he said that he found that there was more academic freedom—

**Prof. Vieth**—In Australia?

**CHAIR**—in Australia. I am sure that is what he said to me, but I am beginning to—

**Prof. Vieth**—That may be the case. I have not worked outside Australia. Academic freedom is a nice term. You are allowed to do things if somebody else will support what you are doing in some way. Because even the individual research time of academics is being eroded, it means that, in order for people to do any sort of research at all, they need some form of grant. In order to get that grant, you have to do something that somebody else likes. Sometimes the grant is forthcoming and sometimes it is not. I think academics are constrained in the same way that other people are constrained. For example, if you want to talk about some elements that may be associated with racial issues, there is often a reluctance to investigate those sorts of things because it is dangerous. It is dangerous for you as an academic and it is dangerous, perhaps, for the university—obviously in a particular way. I only touch on that because that is one of the topical issues, but there are probably others.

**CHAIR**—The topical issue is research in racism?

**Prof. Vieth**—Yes.

**CHAIR**—Up here?

**Prof. Vieth**—It is a significant element of life up here. For people in other places, the issue of race is not in their faces all the time. For example, in Rockhampton I can walk under the bridge if I go for a walk at lunchtime and I can see young kids there sniffing petrol and destroying themselves. That does not occur for many people, but for people who live where there are a large proportion of Aboriginal people, there are those sorts of issues that are very confronting and need to be addressed. It is not my area of research, but maybe some hard decisions need to be at least thrown out into the discussion forum for people to come to some solutions.

**CHAIR**—We tend to look to academics to lead the way in terms of alternative thinking on difficult issues. I would like to think that we do. I am a Melbournian, so maybe I see the world a bit differently. My experience might be different. But I am interested in what you have said about possible constraints on those difficult issues, especially for academics and researchers who are involved in that part of research that is actually for community benefit and development.

**Prof. Vieth**—If we looked at research into, say, a very topical issue like coal and things like clean coal and burying carbon dioxide in the earth, and if we compared it to something like nuclear technology, where we bury stuff in the earth, we are not allowed to bury that in the earth but we are allowed to bury carbon in the earth because that is okay. That is not a popular topic of discussion, and yet greenhouse gases are, when nuclear technology has no greenhouse component. That is a really big issue. But in this state, and probably in Australia, both parties avoid discussing the issue. The Labor Party actually had a fear campaign about nuclear power, though I know that the Liberal Party did not. So, yes, I think there is a question of academic freedom, and that derives from the fact that everything has to be relevant and has to be relevant to people like parliamentarians. What they say is relevant is actually what is relevant. In that sense, there is no freedom for academics to follow what they might like to do. That is a really interesting aspect of academic freedom.

**CHAIR**—Yes, it is, because parliament presumably controls the purse strings.

**Prof. Vieth**—To some extent.

**CHAIR**—I will now hand over to my colleagues. Thank you. It is a very interesting area.

**FRAN BAILEY**—I think we need a separate inquiry for that.

**CHAIR**—Yes.

**FRAN BAILEY**—I am going to preface my questions by telling you that I represent a very large regional electorate in Victoria. I am interested in pursuing your thinking about regional universities, whether they are second-class citizens, the level of research et cetera. In a sense, I guess I want to play devil's advocate. We have had a lot of evidence presented to us about the funding model for postgraduate research. We know that we have problems retaining researchers, we know that we have an ageing academic workforce, and there are all sorts of models that we can look at to provide greater flexibility to deliver the very best that we can for the nation. But we come back to establishing a critical mass within regional centres. I was very surprised to hear your comments, because I have been to JCU before and I know that it has an excellent reputation in marine biology and tropical medicine and those sorts of areas. And in listening to you, I wonder if you are wanting—and I do not disagree with the fact that you may want—a regional university to have a standard of excellence across the board. I am wondering: in this day and age, are we not looking at the wrong model totally for our academic institutions? Would we in fact be better to financially enable an institution like this one that we are at now with more funding for research into particular areas where a reputation for excellence has already been established and perhaps in other areas, whether it be anthropology or whatever the area of excellence is? The bottom line is that there are limited sources of funding, even with industry involvement, even with partnerships, even with international institutions. I would like to tease out some of these issues because I am very concerned about them.

**Prof. Vieth**—I suppose there are a number of issues. First of all, JCU is a special case. JCU is in a marginal seat and every time an election comes around somebody announces how JCU is going to get a new tropical medicine school.

**FRAN BAILEY**—I know a bit about marginal seats. I am the most marginal in the country, but I do not have a regional university in my electorate.

**Prof. Vieth**—It is true. We sit down there in Rockhampton and we watch the stuff that happens: every time there is an election something else is announced for JCU. I am being completely realistic from my perspective as to what occurs, but it is a serious question. And it is a good question because it is true that you cannot have centres of excellence everywhere; it cannot be done. There is some research that can be done in regional universities, and if people wish to go to the tropical medicine school up here from a place like Rockhampton at the moment they simply cannot because there is a lack of support for those students. It would be cheaper for the government to say, 'Yes, we will do this, but we will support students to go and study for that period of time,' so the students do not have to go to work, so they do not have to have a part-time job that means they do not perform well and, therefore, the outcomes of their study period are not as good as what they could have been if they had been given a decent standard of living while they were studying. But, yes, I agree with you: you cannot do everything. If, for example, Rockhampton were to become—there is lots of talk now about what should happen—a part of JCU or were to be collapsed with other universities or whatever, that would not be bad. We

would lose a chancellery that cost millions of dollars, because we have the fourth highest paid vice-chancellor in Australia.

**FRAN BAILEY**—In Rockhampton?

**Prof. Vieth**—Yes. We would save a lot of money just from that and we would be able to spend that on what goes on. But if you are not going to support students to study in a place where they can, then they have to be supported where they are—or where they are has to be—otherwise you lose. We are talking about innovation; we are talking about getting the best out of Australian students. They do not just live in cities; they also live in regional areas. We are saying to them, ‘You can’t do that.’ One of my sons went to the University of Queensland to study because he wanted to do space and mechanical engineering, which is the only place he could do it. Because he was not 25, he was not able to get Centrelink or whatever it is. He had to go to work. He gave up his study because he could not do both his work and his study, and yet he had the entrance score and the interest to do it. If this is what Australia wants to do with its best people, or with its good people, then that is fine, but their capacity for decent outcomes needs to be supported. There needs to be a capacity for this; there need to be decent outcomes to allow people to do that.

I am very fortunate. I went through university. I started off on a Commonwealth grant but then university fees were dropped. So all of my study I have done without any cost to me personally. And that has changed now, obviously. So there is a cost factor: now students do not do research in areas that maybe will not give them some sort of job. We have really done a bad thing to tie jobs to research outcomes, and that is unfortunate because we lose that basic research attitude of: ‘What’s this about? What do I do here?’ Maybe something good will come of that. It is like anything. We have a really strange system in Australia. We say, ‘If you make a film, we’ll give you a producer’s offset’—now it is a producer’s offset, but it was always a tax rebate in some form—‘of up to 125 per cent.’ You can invest in a film and get a 125 per cent tax cut. Why can’t you do that with a university? Why can’t you say, ‘You invest in that university, we’ll give you a 125 per cent tax cut’? It would be very simple. And yet for some reason the film industry is regarded as being better—and I write about the film industry—than academic outcomes, than the industry of education. And it is an industry; it is the third biggest industry in Australia!

**FRAN BAILEY**—We are a committee of the parliament. If we were to make a recommendation to the government to thoroughly overhaul the funding model, what specifically would you be looking for in relation to regional universities? Would you be looking for a weighting for them or for funding to be directed to particular areas?

**Prof. Vieth**—My expertise in that is fairly limited—I am not sure what the options are; I do not know what they do elsewhere—but my advice would be to make sure that research areas that need to be looked at, that have a regional impact, are done through regional universities rather than through metropolitan universities. Perhaps there needs to be a weighting, I do not know. Perhaps there just needs to be a different way of looking at how universities work. I note that the University of Newcastle had funding difficulties some years ago, so the new vice-chancellor came in and directed funds away from administration back into teaching and research.

**FRAN BAILEY**—They have a specialist unit in gastroenterology.

**Prof. Vieth**—Yes, but they grew that and it has worked. At other universities, it seems as though teaching and research are things that are just there to support administrators in their roles. It becomes like a corporation almost: you have huge management and very little to base that on. I could be wrong there, but I really do not know what the best model would be, I am sorry. I have not done a lot of work in the areas of funding.

**FRAN BAILEY**—This is a recurring theme that I have to make a comment on. Everyone can identify the problems but no-one wants to put forward any innovative ideas themselves.

**Prof. Vieth**—In the end it comes down to parliament. What you have said is not quite correct. People have said, ‘We need greater funds for universities; that is the solution.’ But that is not acceptable—

**FRAN BAILEY**—But the innovation is in the ‘how’. People can say that you need a greater level of funding, but it is about how you deliver that and where you deliver it. That is the innovation, isn’t it?

**Prof. Vieth**—Perhaps then do what the Northern Territory government does for Charles Darwin University, say, for 25 per cent of all funding, and say, ‘All the research that we want done we will put through Charles Darwin.’ State governments could do that for regional areas, and say, ‘We need research on this particular area; we will put it through that university.’ I am talking about research; I am not talking about undergraduate funding, which is a different kettle of fish.

**Mr SYMON**—I would like to talk about student funding and pick up on the recommendation in your submission that research students in rural universities should receive additional support. This committee has heard over the last few weeks from many witnesses about shortfalls in the APA stipend system and other problems related to the funding of PhD candidates. I am trying to get a bigger picture. What are your recommendations in terms of the greater disadvantages for students at a rural or regional university compared to, say, the University of Melbourne when it comes to them living off the APA stipend and other forms of funding? Does this university have its own resources to allocate additional funds on top of that, for instance? If I could hear about some of that, it would be of great interest.

**Prof. Vieth**—There are differences in the sense that the University of Melbourne and the universities in Melbourne have a huge cultural feed into the whole culture of Melbourne. So there is a culture there where those people perhaps can get some work or whatever. It does not always occur in regional universities. I suppose if I start from the beginning, one of the questions is: how hard is it for someone to live on a scholarship in a regional area? I am not quite sure what it is like to live in Melbourne now but when I was a student living in Fitzroy and Carlton was easy.

**Mr SYMON**—It is expensive now.

**Prof. Vieth**—It is expensive now, but that is the case everywhere. Even a place like Rockhampton now has house prices that are the equivalent of Sydney’s because of the mining boom in the Bowen Basin. Once upon a time housing was very cheap in Rockhampton. It is no longer cheap, so students find that aspect difficult. There is that element of living. The other

element is that, yes, once upon a time there were funds provided, or the university did have the funds, so that if someone had finished their scholarship there would be carryover funds for up to a year for that student. Both of my students signed up for their PhD at the time when they could have six months extra funding and they chose that. But that is no longer available to students due to the lack of research funding.

Faculties now have no research funds unless they have research centres. For example, if I wanted to go to a conference in New Zealand, once upon a time I would have had, say, \$2,000 a year to do those sorts of things. I do not anymore. There are no funds for faculties that they can use for research. I was once the associate dean for research in a faculty and I was able to allocate funds. Even some lecturers who had PhD students would use their own reserve of funding to pay for those students to get them through the six months until they completed. Those funds no longer exist. Now it is three years and you are finished. That is it.

**Mr SYMON**—If I can take you back to the first part of my question: beyond accommodation, what other differences are there in expenses for a student at a regional university? Again, you are after greater funding and I am trying to find more reasons for that.

**Prof. Vieth**—It is not so much greater funding, it is just whether it could be that there is some flexibility so that they can get to the end.

**Mr SYMON**—If I can just stop you there; you are talking about maybe an increase in the length of the APA stipend?

**Prof. Vieth**—Yes, to make it possible or at least some funding—

**Mr SYMON**—That has been a common theme throughout this inquiry. At the moment it is three years with a possible six months extension. What are your thoughts on that?

**Prof. Vieth**—My suggestion was that we move to the Bologna model of a three year undergraduate degree, a two year master's degree and then a three-year PhD. That would give a total of five years of postgraduate study. Now it is honours, then three years of PhD and that is too short. That is what compresses it. The students have to take on a lot to get through it in a three-year period after an honours degree.

**Mr SYMON**—So under that model you would be looking for the scholarship to cover the honours year as well?

**Prof. Vieth**—No. I think five years of postgraduate study is better. I had not actually considered the funding of that. What I am saying is that, if you had that, you would not need that extra time to do it because they would have already done two years of pre-PhD education.

**Mr SYMON**—Okay. That is a different view on it. Thank you for that.

**Dr JENSEN**—The issue of regional universities and the lack of critical mass with research and so on is a very important one. Should some of the regional universities be looking at mergers or at the very least much stronger strategic linkages with the larger metropolitan universities? With things like electronic journals and so on, it would give you access to a far greater amount

of electronic journals than you would be able to afford as a regional university. What are your thoughts on those sorts of issues?

**Prof. Vieth**—On the question of electronic journals, the subscriptions to the electronic journals are probably no less than the paper journals. They are really incredibly high. Some of the good ones—

**Dr JENSEN**—What I am getting at is, let us say that you had a strategic linkage—for example you became part of UQ. UQ purchases those electronic journals so therefore up at Rockhampton you would actually have access to those e-journals.

**Prof. Vieth**—Again, I think that the question of conflating some of the regional universities into a larger university is already being discussed. We have models for that. The University of California has hundreds of thousands of students and it has different campuses. I should also point out that anybody who does their secondary education in California and qualifies to enter gets into the University of California for free. So we are not really all that far advanced with our wonderful funding models. I do not have a problem with that. For example, I mentioned that we could join with JCU. That might be an outcome of the viability audit that is happening at the moment with the state and federal governments into our university. There may be a case for a large state university that comprises USQ, University of the Sunshine Coast, Central Queensland University and whatever. That seems to me to be a reasonable outcome and it would cut out a layer of management, which is very expensive. But the problem then is that all of those parts have equal representation. We were mentored by the University of Queensland in that transition period from being a CAE to a university. They just made some money out of it each year, so there was not really all that much collaboration. But if there were an amalgamation of regional universities then I think that would be a better idea rather than becoming some sort of tiny subset of UQ.

**Dr JENSEN**—It is a way of actually sharing resources.

**Prof. Vieth**—Yes.

**CHAIR**—Thank you. I am sorry; we started late, unfortunately, and we have now run very much over time. Thank you very much for the opportunity to speak with you.

[9.15 am]

**SPEARE, Professor Richard, Director, Anton Breinl Centre for Public Health and Tropical Medicine, Biosecurity and Tropical Infectious Diseases Research Group, James Cook University**

**CHAIR**—Welcome.

**Prof. Speare**—I am here representing Lee Skerratt, who put in a submission but unfortunately cannot be here. He is assisting with training in wildlife disease down south. He sends his apologies.

**CHAIR**—Thank you. Although the committee does not require you to give evidence under oath, I advise you that these hearings are formal proceedings of the parliament. Consequently, they warrant the same respect as proceedings of the House itself. It is customary to remind witnesses that giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. We thank you for your submission and now welcome you to make a brief opening statement before we proceed to questions.

**Prof. Speare**—Thank you very much. I am the Director of the Anton Breinl Centre for Public Health and Tropical Medicine. I am involved in all aspects of academic life: teaching, administration and research. Our centre tends to do applied research because we are interested in using research results as quickly as possible to make a difference to health. Lee Skerratt is an academic within our centre. We specialise in public health and tropical medicine, with a focus on rural, remote and Indigenous populations in Australia and public health in neighbouring countries. We are actually one of the largest public health training units in Australia. We have about 440 postgraduate students, but most of them are part time. We have approximately 20 academics, but I will just talk about the research side. Eight of them are largely in research-only positions. Most of our academics do research, but we have a group of academics who are in research-only positions. Of those eight positions, only two are tenured. The others are funded by grants, fellowships or short-term contracts. Lee, who put in the submission, falls into the category of short-term contracts. Of the two tenured positions, only one of them is full time. The other is a fractional position. I suppose I am discussing this in detail just to highlight the difficulty that is associated with a research-only career within universities. The Anton Breinl Centre is quite dedicated to doing research because we see it as a way of improving health, but it is quite difficult to get funds to support a person through their a career. It is usually done through getting grants and soft money.

I would just like to make three comments on the training of doctoral research students. The Research Training Scheme is an excellent scheme and it really does assist greatly with retaining doctoral research students. One of the problems that we have is that most of the students that we attract through our centre are health professionals. A lot of them are mature health professionals; they are not coming through an honours pathway. They have done their degrees, they have worked for a while, they have decided that they are interested in research and their average age is late 30s and early 40s. There is real problem attracting them because, even though they are interested in research, when you tell them what the value of the scholarships are, it just is not

competitive. It gives a very bad message to them that research is not actually valued. To get the people who are interested in doing research with us, we need scholarships in the region of \$40,000 to \$50,000 a year, not \$20,000. We do top up scholarships, but it is difficult to raise them from \$21,000 to \$40,000.

I am associated with Indigenous research students as well. For Indigenous research students across the board, the same applies. A lot of the Indigenous students with tertiary qualifications have quite an extended family depending on them and, unless they can get high-value scholarships, they cannot actually undertake research. For example, we had an Aboriginal academic who was working with us who wanted to do a PhD and we have been grooming her to do it, but she could only get a scholarship worth about \$26,000 to \$29,000 through JCU. But, luckily, a unique scholarship opportunity came up at the University of South Australia for \$56,000, so she applied and got that scholarship. But without that scholarship she would have been unable to do doctoral research full time.

The other thing is that, with our health professionals, it is very difficult to get part-time scholarships. They are either all full time or none, either all full time or all part time. We like our research students to work in their workplace so that they can do research that is linked to their work and then have immediate outcomes on what they are trying to do. But, without a part-time scholarship that can support them in that, they really have to be in a unique position where their employer is prepared to support them and give them time to do research. So, as to the points I would urge you to look at recommending—you have discussed that the level of scholarship funding be increased by 50 to 100 per cent across the board; that the number of scholarships available be increased, particularly in regional universities; and also that part-time doctoral scholarships be offered as well for people to use in the work situation.

The final point I would like to talk about is cross-institutional enrolment in PhDs and research doctorates. At the moment, it is incredibly difficult for a student who is enrolled at, say, JCU to also be enrolled at Monash University. I have a student at the moment who is considering coming in to do a PhD with us, but she is also linked with Charles Darwin University in Darwin. So, she has this real dilemma: should she be at JCU with the set of advantages here or should she be with Charles Darwin with the set of advantages there? Really, it should be possible to split the scholarships between universities because each university, depending on the student, can bring different advantages and the end result will be much stronger than a person trying to cope at one university alone. That is my statement. Thank you very much.

**CHAIR**—Thank you. You have raised a number of issues that we have heard on many occasions. Dr Skerratt made reference to the issue of international students. He indicated that seven of his eight PhD candidates are international students. I just wonder whether his experience is the case in other regional universities. Primarily, there appears to be a lack of interest from domestic students. Also—this may be unfair to ask you, but I am just wondering—we are obviously thinking about international students who come here to study, but we also think about them in terms of whether they will stay in Australia and make a contribution here, and go on to be Australian citizens and live in our community. That way, we get the best of both worlds: we get the best and we also get our money's worth from our investment, if I can use that language, which is constantly being used. Would you like to make some comments on that?

**Prof. Speare**—One problem that I have run into with international students involves AusAID. As I say, we like our health professionals to do their research where they are. If they are funded by an AusAID scholarship, that is impossible. With an AusAID scholarship, you can only spend 12 months outside Australia. I have a student in India at the moment who is under threat of losing his scholarship because he wants to be based in India and he has exceeded his 12 months.

**CHAIR**—Is that an Australian student or an international student?

**Prof. Speare**—An Indian student. So with AusAID scholarships that is a really serious consideration, that students basically have to spend the majority of their research time in Australia, whereas in some circumstances, it may be better to support them doing the research where they live and where they work. Lee certainly has more international students than I supervise. I am supervising some of his. The area he works in, wildlife disease, is very weak in Australia but it is stronger and more attractive overseas. That is why he has a higher proportion of international students. We have quite a good reputation in wildlife disease. Most of my students are Australian-based. I have only two international students. The real difficulty with international students is the time line. It is quite difficult for them. They are running on a deadline so, if anything goes wrong, they may not actually complete their studies adequately and they may have to terminate them, whereas, if it is an Australian student, if something unexpected goes wrong, they can often get extensions to try and address those problems. But I have not had a lot of dealings with international students.

**Mr RAMSEY**—I think you were sitting in for the previous witness's evidence when Fran Bailey brought up centres of excellence, which is obviously an area that JCU works very well in. However, are there facilities that we should be looking at leaving as teaching-only facilities? Should we be saying, 'This is what we do here; we should concentrate on the things we are very good at and do research in those areas,' and then in the other areas say: 'It's just too hard to do this here. We should just concentrate on being a teaching-only facility.'

**Prof. Speare**—I tend to favour that point of view. For example, there are a lot of public health institutions in Australia—probably about 20 academic institutions. Being in the tropics, we have taken the opportunity to specialise in that area, which has turned out to be to our advantage. I think regional universities need to recognise where their advantage is and concentrate on that. JCU across the board has done that fairly successfully, focusing in the health area on tropical, Indigenous and rural and remote aspects and, in science, having an across-the-board marine science and tropical science focus. That is possibly why JCU as a regional university has been quite successful. It has certainly been my philosophy with the Anton Breinl centre to look for opportunities and to go where we have a niche, which will make us much more competitive.

**Mr RAMSEY**—In that light, does JCU offer research degrees in areas that it is not strong in?

**Prof. Speare**—Yes, of course.

**Mr RAMSEY**—How do we get the decision to focus on certain areas to be made at a university? It is made at the local level at this stage; should we be trying to apply some influence higher up?

**Prof. Speare**—It is amazing what money does. If you put money into areas of particular interest, the researchers will follow. The Commonwealth does that all the time within the health department. If the health department are interested in an area of health, they move the money across and the interest follows.

**FRAN BAILEY**—I am mindful that you are also here representing Dr Skerratt's views. Obviously the funding issue is coming through in evidence, but he raised the issue of the length of time taken in teaching and reducing the amount of time for supervision of the research students. Could you tease that out a little bit?

**Prof. Speare**—The funding model within the university means that the vast proportion of money comes in for student load—students multiplied by subjects generates funds. Within schools, the academics have a certain teaching commitment. The head of school will decide what proportion of teaching should be done by academics, and it is often fairly high. On top of that, academics can supervise students, and that gets added to their workload. For example, I think the current credit for supervising a full-time PhD student is 26 hours per year. That is what has been negotiated as far as I understand, and it is far lower than the amount of time that is actually involved in supervising a student. I think Lee's point was that, if he has eight students and he is only getting credited for 26 multiplied by eight, it is a vast underestimate of the amount of time that he has to commit to supervising those students. Teaching tends to take up most of the time and the supervisory commitment tends to be downplayed.

**FRAN BAILEY**—I want to ask another question on a totally different topic. The ageing of the academic workforce is certainly an issue—and everyone raises that—but I am interested in what sort of strategy is being put in place. What are you doing, for example?

**Prof. Speare**—We are identifying growth areas and trying to attract younger people into them. The difficulty is that often the budget is fully committed. The ideal situation would be to have an area of particular interest, to bring young people in and to have the older people stay in for two or three years and then retire. Then the new people move in. But if the budget is fully committed, where are you going to get the funds to move the young people in before the old people move out of those positions.

**FRAN BAILEY**—So it is like a transitional mentoring period?

**Prof. Speare**—A transitional mentoring period would be perfect. The only way you can do it is by building up the student numbers to generate excess funds and then bringing the new people in. The money within universities is so tight that there is no excess that you can use to bring in people for a training or mentoring period. We are fairly research productive, so we try to use the research quantum—the money we get from the Commonwealth when it comes down through the university—to employ new staff members. At the moment Lee Skerratt is employed on that money—but only at a 0.4—and we are employing another person full time. But it is very soft and depends on your research productivity. It is a difficult way to get people in, but it is a way of getting people in. Hopefully, by the time they are ready to come on or the other people are ready to retire, there is a position vacant for them so they can then move into a tenured position. It would be nice to have something very secure so you could say: 'We've got this money here. We can employ a person to fill this position, and then they will move in to replace the older people when they transit out of the system.'

**FRAN BAILEY**—It could be a way of easing out the older ones as well—

**Prof. Speare**—That is right.

**FRAN BAILEY**—to get the new ideas and the new areas of research.

**Prof. Speare**—Yes.

**FRAN BAILEY**—We could ask you many more questions, but we have a limited time.

**Mr SYMON**—I would like to pick up on your point of splitting the research training funding for candidates between universities. At the moment, as I understand it, it is all or nothing; there is no formal procedure where you can do 50 per cent at one university and 50 per cent at another. If you did, one university would still get 100 per cent of the funding and one would get zero. How do you think that could be improved? Should it be done formally through a government process that that is allowed in the system? From what you said, I suspect that it does produce a better result for some students if they can actually go and pick up that knowledge from more than one source, especially if it is in a regional area or if they are studying something which is outside the norm. This has come up a couple of times at these hearings. We did not hear about it at the first round of hearings, but as we have got further out of the major cities it has come up more often. Is it something that you think would be most advantageous in regional areas, or do you think it would also apply in metropolitan areas as well?

**Prof. Speare**—It would definitely be of the most advantage in regional areas. One of the problems we have here is lack of depth and breadth of expertise. I may have a student who wants to work in a particular area. I know I can supervise them adequately but I am not the best person for the content. It would be nice to call on an academic down in Melbourne and say, 'Would you like to co-supervise this student?' Some academics say yes—

**Mr SYMON**—It is a very informal process, though.

**Prof. Speare**—Yes—without any tangible reward, but some say, 'No, unless the student transfers down to Melbourne, we're not going to be involved.' It would be very nice to be able to split the credit for the student between institutions, then both institutions have a responsibility and a reward from looking after that student, with ultimately a better outcome for the student.

**Mr SYMON**—From the university end, is there any practical impediment to that other than our funding model as it stands at the moment?

**Prof. Speare**—No, I cannot see any at all. Within the universities we do it all the time, splitting it between schools. If there is supervision across schools or use of facilities, it will be divided up fifty-fifty or into thirds. The model is there within the universities; I cannot see why it cannot apply across universities.

**Mr RAMSEY**—Why does it not happen then?

**Prof. Speare**—I am not sure. It seems to be an impediment that it cannot be done. I have tried to get it done and they just say that it cannot be done.

**CHAIR**—It is probably the funding model.

**Mr SYMON**—It is the funding model.

**Dr JENSEN**—I guess the question then would be: who confers the degree? But that is not really my question. Dr Skerratt's view was that an impediment to students seeking higher degrees by research was limited opportunities within Australia. Do you think that is a regional view or do you think that is a more general view throughout Australia?

**Prof. Speare**—In the area that Lee was talking about, the wildlife disease research area, it refers to the discipline. There is no clear pathway once you do research in wildlife disease. It is very badly supported by the Commonwealth and by the states, so there is no clear career pathway. In the public health area that does not apply. In those well-established areas that is not the case. You can work out where to go—

**Dr JENSEN**—So basically it is an issue where we as a nation cannot afford to put massive amounts of funding into every single discipline area, and the problem for Dr Skerratt personally is that his area of expertise is one that is not, in his view, adequately funded in Australia, but other areas are.

**Prof. Speare**—Yes. In my view, too, it is not adequately funded. I have a veterinary degree as well as a medical degree and work in public health, and a lot of the new diseases are jumping out of wildlife into domestic animals—the Hendra virus, for example—or into people, but the wildlife disease area is almost totally neglected. It just does not get the support it deserves. So his point is very valid and his comments are quite valid as well, but it is mainly because there is no funding going into that area at the moment, whereas it is funded very adequately in North America, for example, and in Europe. They recognise the importance of wildlife disease research. I think Australia will come to that but it will come to it later than it actually should.

**Dr JENSEN**—Is that an issue of Australia not having the resources to fund everything across disciplines; therefore we need to try to pick areas of importance and maybe we will come to the realisation of them a little bit late whereas somewhere like the United States can afford to fund essentially everything?

**Prof. Speare**—Yes, sure. The government have to decide where they want to put their emphasis.

**CHAIR**—Thank you very much, Professor Speare.

**Proceedings suspended from 9.38 am to 9.52 am**

**COCKLIN, Professor Chris, Acting Deputy Vice-Chancellor, Research and Innovation, James Cook University**

**MARSH, Professor Helene, Dean, Graduate Research School, James Cook University**

**CHAIR**—I now call representatives of James Cook University to give evidence. Although the committee does not require you to give evidence under oath, I should advise you that these proceedings are formal proceedings of the parliament. Consequently they warrant the same respect as proceedings of the House itself. It is customary to remind witnesses that giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. Thank you for your submission. We now welcome you to make a brief opening statement before we proceed to questions.

**Prof. Cocklin**—Thank you. I would like to make a few comments about the broad context in which James Cook University stands as a regional university servicing North Queensland and beyond. As I am sure has been brought to the committee's attention, the Australian system is characterised by regional universities. I think that at once we imagine in our own minds what that means, but I would like to point to the fact that, in reality, the notion of a regional university is as diverse as it is common. In particular, in my own mind, I see that there are really three types of regional university. There is one type that extends from a metropolitan university that is substantively based in a metropolitan place and has regional campuses; I am thinking here of Deakin and La Trobe by way of example. There are other regional universities that are situated very near metropolitan areas but are in smaller centres, and here we can think of places like Newcastle and Wollongong. Then there are distinctly regional universities—places like James Cook here in Townsville. We are as close to Brisbane as Melbourne is. This is a distinctly regional university, and there are a small sector of people who like that.

In terms of postgraduate training, I think that raises at least two important issues for us—one that is generic to regional universities like us and one that is specific. From a general point of view, I think we have a very specific role to serve in terms of the education at postgraduate level of rural, remote and Indigenous people. It has been identified in a number of submissions to your committee that these present specific challenges in terms of the appropriate training of people who, in many ways, are disadvantaged by virtue of their location and sometimes their educational upbringing. As you may well know, James Cook is the second largest provider to Indigenous students, and yet across Australia we know that the participation of Indigenous students is at a very low level. The same sorts of numbers can be drawn about rural communities.

The other point I want to make is in many senses a much brighter point. James Cook University exists in a unique situation. We are the only university globally that sits at the interface of two World Heritage areas and what we do is defined by our place. The university has become a standout performer, not only within Australia but globally, in our emphasis on tropical knowledge and innovation. The university is investing strongly in promoting that area of expertise, which we loosely refer to as tropical science, knowledge and innovation, tropical SKI. At the present time the university is substantially increasing investment in that area.

This presents a challenge in terms of research training because we attract a very significant number of international students. Indeed, we are one of the largest providers of education to the American market. At the International Coral Reef Society Symposium only last month James Cook University was identified in the closing remarks as the global mecca for PhD studies in coral reef science. As you also know from a number of submissions, we face some very significant problems in attracting significant international students, and that is partly through the financial impediments and a range of other constraints on postgraduate training. With that sort of broad contextual statement I will hand over to Helene Marsh.

**Prof. Marsh**—I understand that a number of submissions have raised the point that we have a national emerging skills crisis in academia and research. It is my contention that this skills crisis will not be fixed just by the market, because the lag times in training are so long. We need to do something to attract researchers in areas of national priority. Chris raised Indigenous researchers. One of the biggest impediments to attracting Indigenous researchers is the fact that they tend to have significant family responsibilities and that they have the potential to earn a lot of money. Therefore, they are not attracted to a stipend of \$20,000 a year. The same, of course, applies in many other areas of national priority, for example, areas associated with the resources boom. It is very hard to attract a geologist or an engineer to research training these days.

Australia also needs to be internationally competitive in attracting international research students. You have heard a lot about that. I think we need to increase the stipends, to work with the states to remove barriers such as school fees and to reduce fees in the way that New Zealand has done. I believe that the level of return to the university for an international student has to be at least as great as that for a domestic student. For example, China offers lots of stipend scholarships to international students from top universities but the host university has to waive their fee, which means it is a net loss to the Australian training institution.

We have to make sure that our researchers are trained in mode II research environments. We need good links with industry. I believe that was achieved in the early days of the CRCs when there was a requirement that they invest in research training. That has certainly been watered down. It does not necessarily apply to all national research centres, such as the CERF program, which this university is very engaged in.

We need to maximise incentives for collaboration across institutions in research training. I find it, frankly, ludicrous that we are encouraged by government policy to have conjoint enrolments with international universities through cotutelle and other arrangements and yet there are significant disincentives under the research training scheme for similar arrangements across Australian universities because of the administrative impediment to sharing a completion.

I think we need to maximise our return on investment in research training and we need to do this in two ways. A lot of HDR research is not published because students do not have time during their candidature and when they move on to new jobs they lose the imperative to publish that work. I find it anomalous that a student who finishes their PhD within the tenure of their scholarship has to immediately surrender their scholarship and cannot use it to support themselves during the interregnum of the examination period, which typically takes several months. I think we also need to increase the number of postdoctoral opportunities in this country. The ARC postdoctoral fellowships scheme has a success rate of less than 20 per cent, and only students with a significant publication record even think of applying. And I think we need to

ensure that research training is evidence based. I know from my colleagues on the Council of Deans and Directors of Graduate Studies in Australia that it is very difficult to get research into research teaching practice funded because it has not typically been a priority for the Australian Learning and Teaching Council. Thank you.

**CHAIR**—Thank you very much. I want to explore the comment that you made about Indigenous researchers not being attracted to research because of family commitments and because of the value of the stipend, which is pretty much the case for everybody else as well. I am raising this point because I would like your views on it. We were at the Batchelor institute last week and your colleagues who gave evidence to us talked about Indigenous researchers and all the obstacles that they face. Obviously family is one of them, along with living in remote locations, but they also talked about our failure to deliver to Indigenous Australians an education system that they can benefit from in a manner which is relevant to their cultural experience. Can you elaborate a little bit on that, given that we are here in Queensland, where there is a high Indigenous population and, if any universities attract Indigenous research, it will be up here? What is the state of play with Indigenous researchers?

**Prof. Marsh**—I think there are two parts to your question. There is the concern about the low proportion of Indigenous people, particularly from remote areas, who make it to university. I agree that there are many reasons for that and they are deeply concerning. The reasons include the relevance of Indigenous education to people living in remote areas and obviously the opportunities that are available. There is also a big concern about the areas in which they are attracted. My substantive position at this university is professor of environmental science, and I used to be a head of department in that area. I have in my own research worked extensively in remote Indigenous communities and I have really wished to try and encourage Indigenous communities into environmental science programs. I failed, partly because there were so few students that had the prerequisites but also because they did not have the role models, so they did not see environmental science as a career. But the ones that do see it as a potential career face incredible impediments, which are, I believe, partly financial. That is why I think it is just ludicrous to expect that these people will ever be attracted to research training, even on the standard scholarship.

Even if the scholarship is raised by 30 per cent, as so many people have recommended, I still do not think they are going to come. There are two reasons. Firstly, they tend to have greater family commitments at an earlier age than non-Indigenous Australians. Secondly—and it is the same problem with the engineers and the earth scientists—Indigenous Australians who have university training can usually get very good jobs. With that combination, why would they come and train as researchers? I arranged a few years ago for David Suzuki to donate money to this university for a scholarship for an Indigenous student taking a masters program, but we failed to award it because it was considered too low in value to be attractive. Similarly, with the Torres Strait CRC we had a prestigious research scholarship for an Indigenous person. We did eventually get one, but the amount of money was too low to attract students because they are quite rare and they really can get very good jobs.

**CHAIR**—I want to ask you about the national priority postgraduate research scholarship scheme that you have recommended. How would a scheme like that be developed and implemented? Could you talk a little bit about that.

**Prof. Cocklin**—If you look across the research funding organisations, particularly the Australian Research Council and a number of other bodies, we already have a system of national priorities that have been identified. Those priorities have come under some scrutiny, particularly through the Cutler review, as to whether the mechanism by which they were developed was the appropriate one—and certainly the question has been raised as to whether they were the right set of priorities. As to the mechanism by which we might revisit those, I am not quite clear on how we might transact that nationally. But I think there is a recognition that we need to be more targeted in a range of ways about the allocation of scholarships to areas of national priority.

In a sense this goes back to your previous question—with Indigenous people it is a matter of identifying what it is that is important to them. One anecdotal example from James Cook is that the one area in which we are very successful in recruiting Indigenous students is health and the allied health disciplines. I think that is because they can see there is relevance to it. That is one very small subset. In other areas, I think there is clearly room for the identification of a set of national priorities. Next week, for example, we will be meeting a number of players around the marine research and development agenda and identifying the notion of a national marine R&D platform, which is something we really do not have at present. In short, I think the need is there, but the process by which we arrive at it is something I am a little less clear on.

**Prof. Marsh**—There may not be a total alignment between national research priorities and national research training priorities. One would hope that all areas of national research priority would also be areas of national research training priorities. But we have totally neglected the basic enabling sciences in this country; we have allowed them to run down. All the data show that there is an emerging skills crisis in that area, particularly in terms of academic recruitment. I think there are areas where we are going to be really short of people in a few years. I will give you an example: engineering. Engineering may or may not be an area of national research priority, but I am sure it is going to be an area of national research training priority because it has been so difficult to recruit highly talented engineers into PhD programs because they can go out and earn \$80,000 to \$100,000 as a new graduate. So, down the track, I think we are going to find that our engineering faculties in this country are largely composed of people from abroad. I think that having an international faculty is a good thing, but I do not think an international faculty without Australians is a good thing.

**CHAIR**—I wanted to ask you about that, because that is one of the questions that really taxes our thinking. At most of the universities, you can see that there is a desire to free up some of the visa impediments and other issues in relation to international students to meet the demand here in Australia, but it should not be done at the expense of identifying problems with the domestic students. I think that we are beginning to see what some of those problems are. It should not be done at the expense of encouraging the domestic students to get on with it, but obviously it is a two-way street.

**FRAN BAILEY**—I would like to continue on this theme, with questions about international students. From reading your submission, it seems there are a lot more international students attending JCU than there are at other universities around the country. Do you actively recruit international students? If you do, why do you? Are the international students attracted to this university because of particular areas of excellence and expertise?

**Prof. Cocklin**—Yes to most of those questions. Yes, we do actively recruit, but I think if you look at the distribution of many of those students within the university they fall into a fairly small number of concentrations. In particular—and this is the point that I was making earlier—this university has a very distinct flavour to what it does. It is a highly differentiated university because of its location in a very particular place. That has spawned research excellence in a number of fields, particularly in the areas of marine sciences, coral reef ecology, rainforest science, environmental science and geosciences, which we have touched on in a number of other ways, particularly economic geology, which is one of our strengths—though not on the research training agenda at the present time because it is very hard to recruit people. So students are attracted to this particular part of the world and that is a wonderful opportunity and something that we cherish, but it also raises a number of challenges. In terms of the point of discussion at the moment, it is partly the challenge of bringing those people in and enabling them, but it does also raise questions about—

**FRAN BAILEY**—I understand that. Is there a particular part of the world where you are recruiting most heavily? Have you got a greater percentage of students from a particular country?

**Prof. Marsh**—We have research students from a very large number of countries. I do not have the number at my fingertips, and I apologise for that, but it would be something like 60 countries. I am sorry I do not know exactly, but it is a lot. We get quite a few students from South-East Asia and we get a surprising number, I think, from both Europe and the United States. We have very few from Africa. There are some from Africa, particularly in the public health area, but mostly they are not from this region. I would say Europe, the United States and South-East Asia would be the key areas, with some from the Pacific islands.

**FRAN BAILEY**—Given the amount of effort that goes into training these students and supervising higher levels of research, are you interested in lobbying the government about changing the visa regulations in order for these students to remain here to work for a longer period of time and possibly to become permanent citizens? This has been put to us by other universities, which is why I am asking you. It is not mentioned in your submission. Given the number of overseas students, I was surprised at that.

**Prof. Cocklin**—If we can back up a little bit, I think the broad point is that we would much prefer to see a greater number of Australian students entering into the HDR programs. There is no question about that. It is a source of national concern that there are not sufficient Australian students entering into the programs. I think that has to be made very clear.

**FRAN BAILEY**—That is accepted.

**Prof. Cocklin**—Now, as far as the international students are concerned—and as Professor Marsh has indicated—there is an element of academic vitality that extends from having the presence of international students. Having them is part of the colour and the fabric that makes up international institutions and, accordingly, yes, I would prefer to see that the pathways for those people entering Australia are made easier in the specific domain of postgraduate training. I think the question of whether they stay on is a question that is probably not necessarily for us to answer.

**FRAN BAILEY**—I would have to say that I am surprised by that, because other universities have submitted that to us in their submissions, about lobbying to get the visa regulations changed for exactly that reason, to retain staff. They say there is quite a hefty investment. Also, they are even looking to a means of addressing the ageing of the academic workforce.

**Prof. Cocklin**—Sure.

**FRAN BAILEY**—So, given the high percentage of overseas students that you have here, the reason I am asking is, as I said, that I am surprised that you did not mention it.

**Prof. Cocklin**—It is predicated a little bit on the assumption that you are not getting sufficient domestic students, so that if you had a larger cohort of domestic students coming through you would not necessarily be quite so outspoken about the need for internationals. Academic workforces benefit from having international people—there is no question about that and it has to be said.

**Prof. Marsh**—I also think that when you have students from developing countries there is a moral issue. If you are training them to go home, to make a difference, there is a tension between that and training them to stay here, to make a difference.

**FRAN BAILEY**—Yes, there is always that balance.

**Dr JENSEN**—Professor Marsh, one point that you brought up is something that we have not heard before and, from personal experience, I know it is something that I believe is a critical issue. After a student has handed in their PhD for examination, the funding stops and therefore the student will tend not to write papers. In my case I had three sole author publications during my PhD and I could probably have had one or two publications afterwards as well but unfortunately—it is as you stated—I never wrote them up, so that stuff is not out in the literature. I would like you to go into that issue a bit and also go into the issue of examination. One of the examiners that my thesis went to was in the United States. It sat there for 2½ months and then without contacting us she sent it back as sea mail, so the examination took ages. This means you have this period after you have submitted a thesis when you are no longer on your stipend and you can have this huge gap between when you submit and when your thesis is eventually accepted.

**Prof. Marsh**—I will address the second part of your question first. As to the best examination system for PhDs, it is a bit like the best school system: it follows you around. I am on an international working group looking at the future of the PhD, and everyone believes that they have the best PhD examination system. The Australian system is unusual in that it is almost totally dependent on external examination that is mandatory in a way that is quite rare in the developed world. I think it is a colonial heritage. On the other hand, it does enable us to consistently benchmark against the best universities in the world—and that is really important and highly valued. Given that so much of the RTS funding is determined by completion, I think external examination has to be retained to stop cheating. Obviously, if it were an internal examination system like that in the United States, the temptation would be huge for universities to get slack and self-interested.

So I think external examination is really important. And I think the capacity to use external examiners is very good—the research shows that about half the examiners used for Australian PhD theses are external to Australia. The flip side of that, as you have correctly pointed out, is that inevitably there are delays whether you use international examiners or Australian examiners, because the university really is dependent on their charity because the amount of money that is paid is so token: a couple of hundred dollars. As someone said, they got paid more for looking after their grandchildren—and that was more fun. Scholars examine these because they are genuinely interested and committed to the next generation. But the best examiners are very busy people and so you cannot order them to—

**Dr JENSEN**—Speed it up.

**Prof. Marsh**—speed it up, even though you try very hard. And the issue of the recalcitrant examiner is one that occupies the mind of every dean of graduate research studies in the country. So there is an inevitable interregnum between submission and completion of the thesis. In addition, the examination process is seen as a formative process, not a summative process, so there is the expectation that the student will have to complete some revision. So at the moment we have a disconnect between the scholarship situation and not only the time of candidature but also the fact that the examination period is not even considered as part of the candidature. I think that it would be reasonable, if the time of scholarships were extended—or even if it were not, but preferably if it were—that a student be allowed to retain their scholarship during the examination period in the expectation that they would use that to complete the publication of their papers from their thesis. There are huge advantages in this: the students are used to being poor and this state is being prolonged just a bit, they will have a head of steam because they have just completed the writing process, they are really on top of it, the literature is current et cetera. And the minute they go to another job, their employer's priorities will inevitably be different and they will be consumed. Your story is typical; it is my story, too.

**Dr JENSEN**—Thank you very much.

**Mr SYMON**—My question is on RTS funding—I suppose most of my questions today have come back to funding. Your submission, on page 4, talks about how it falls short of the cost per student of delivering programs. You mentioned that high band costs are about \$32,000 a year and you get \$28,000. I am interested in your expanding upon that and on the low band as well, because I believe there are only 28 disciplines that come under the high band. Do you have any thoughts on that? Should there be a middle band or should there be a flat service for that as well?

**Prof. Marsh**—The optimum number of bands will depend on which discipline you talk to.

**Mr SYMON**—Okay.

**Prof. Marsh**—I do think that the discrepancy at the moment, the sharp relief between the high band and the low band, is crude and inappropriate. I guess the federal government's line will be that they provide the money to institutions and it is up to institutions to fund across disciplines as they see fit. That is true, but of course there is an inevitability about this, that universities attempt to arrange their internal funding to reflect the drivers that generate the money. I think it is a little bit naive to think that the universities are going to make different arrangements internally from the external drivers.

I think the situation with regard to low-band is really very serious. I quoted the high-band figures because I have not had them at my fingertips, but I think the discrepancy is probably even worse for low-band. Some of the banding categorisation seems quite anomalous. For example, I think that anthropology is rated as a low-band discipline, and yet the field expenses of an anthropologist would be very similar to those of a geologist. So there really are some quite serious anomalies which certainly constrain the sort of research that low-band students can do. In all cases there is quite a significant gap, particularly when you take the cost of research into account. As we pointed out in the submission, even high-flying researchers can miss out on external competitive grants occasionally, and the student cannot wait, so there have to be internal mechanisms to make up the shortfall.

**Mr SYMON**—I presume I know the answer to this: following on from that, would you see a need for greater funding for a regional university to cover expenses like that—especially travel, because everywhere is a long way from where we are now?

**Prof. Marsh**—You know the answer: yes.

**ACTING CHAIR**—We could have a chorus!

**Prof. Marsh**—I am sure you will have a chorus. I am sure that you have a lot of denials from people in the metropolitan universities as well. You are absolutely right that everywhere is a very long way from here, and collaborating with people in bigger centres is always very expensive. Even collaborating across our campuses is expensive. It is further from Townsville to Cairns than between—

**ACTING CHAIR**—Melbourne and Deakin universities.

**Prof. Marsh**—Almost all the universities in New South Wales would be closer—and certainly all of them in Victoria, I think.

**Mr SYMON**—I suppose I am looking for reasons that there could or should be different payments under the RTS—for high-band, low-band, regional and in-between-band—because to me it looks very arbitrary at the moment. It has just been set down on a piece of paper—one size fits all—and we are not all in the same place or doing the same thing.

**Prof. Cocklin**—This is an issue that permeates the whole regional loading system of the universities, because the way that that is being applied is uneven. I think part of the story around the HDR and the research training part of it is not just about the research training in and of itself either; it is about the research and the context in which these students are working. The additional costs of operating in a region extend to the supervisory teams, which are also having to dip into their pockets for a fair amount of the research training because, as we know, the RTS system does not meet the full costs; we are dipping into other pots to subsidise or pay for that training. When you then ramp that up and say that the entire costs of doing business in a place like this are much higher, as they are, it just escalates, and it is all part and parcel of a much larger problem. I understand your concern about how you then instil a greater degree of logic and coherence, because we have an absurd situation with the regional loading where Wollongong gets it and Newcastle does not—or the other way around; I forget which way it works.

**ACTING CHAIR**—It goes to your definition of regional.

**Prof. Cocklin**—That is right, and I think this is a complex issue.

**ACTING CHAIR**—In some categories Adelaide, for example, is regarded as regional.

**Prof. Cocklin**—Yes. So there is a complexity there that needs to be resolved. I think it has been done very arbitrarily, and I would say that there is actually a degree of cynical rorting of the system, quite frankly. Sorry.

**ACTING CHAIR**—That is all right. We do need to keep our minds on the clock.

**Mr RAMSEY**—Before I start on my question, I have a follow-up to that. We have not actually had a breakdown of high-cost and low-cost amounts and what subjects and universities they are associated with, so I would suggest that perhaps the secretariat might provide that for us. I think it would be helpful.

I would just like to bring you back to something that was discussed before, which was the national priority postgraduate research scholarship scheme that you proposed. I always like to see clear language used. We should understand what we are talking about. Because of where you sit in the world, is this actually an Indigenous training program? Is that how you see it? Or can you identify to me some other groups that you think this will fit and that it should be aimed at? I do not mind if it is an Indigenous program, but we should understand what we are talking about.

**Prof. Marsh**—I do not think it is only an Indigenous matter at all. I guess it may have been inappropriate for us to lump priorities for Indigenous people in with the national skills shortage in some key disciplinary areas. I see it as having two parts. There are some equity issues that need to be addressed and we need to get researchers from particular categories in there—I am using Indigenous as an example there. But there are also some key disciplinary areas in which it has become increasingly difficult to recruit people into research training because of the extreme dissonance between what they get on a scholarship and what they can earn in the marketplace.

**ACTING CHAIR**—What would some of those areas be?

**Prof. Marsh**—Engineering, earth sciences—a number of basic enabling sciences are the ones that come to mind for me from my experience. Other people may identify some other areas. IT is probably another one. It is just very difficult when people can leave university and immediately get a very good job that is very highly paid. Spending four more years on a low scholarship and a period of uncertainty on soft money before you actually get into the permanent workforce is a big disincentive.

**Prof. Cocklin**—I do not have a well-formed set of categories that these would fit into, but I think we are also underservicing the market in the PhD arena in terms of looking at the cross-disciplinary opportunities. Clearly, we know that some of the most exciting advances and knowledge are not within the traditional disciplines. I support entirely what Professor Marsh said about the need in those standard disciplines, but there are other areas. Take, for example, medical information systems. It is not an area for which, as far as I know, there is even an undergraduate qualification in Australia let alone a postgraduate qualification and yet it is one of the high-

priority areas—storing and accessing adequate information. I met a person the other day who was one of the first people I have ever encountered who has actually done a cross-disciplinary qualification at PhD level in business studies and medicine. This is somebody who is looking to commercialise the products of medicine. We do not do enough of that. I suspect if we devoted our minds to it we could quite quickly come up with a list—it might be a small list or a big list—of cross-disciplinary areas where there are distinctive national priorities. The whole issue of cross-disciplinary training is very important as a national agenda in and of its own right.

**Prof. Marsh**—I would like to strongly support that last point.

**ACTING CHAIR**—Yes. I think you make a very good point. We are out of time. My only closing remark would be the fact that this committee does have a very high regard for the contribution made by regional areas and that is why we are here. So thank you very much, and thank you to the other witnesses.

Resolved (on motion by **Mr Symon**, seconded by **Mr Ramsey**):

That this committee authorises publication of the transcript of the evidence given before it at public hearing this day.

**Committee adjourned at 10.34 am**