



OFFICE OF THE GOVERNOR  
VICTORIA

**DEAN'S LECTURE  
MELBOURNE GRADUATE SCHOOL OF EDUCATION**

**Tuesday 10 October, 2017**

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**Members of the Faculty**

**Distinguished guests**

**Ladies and gentlemen**

I acknowledge the traditional owners of the land on which we are gathered, and pay my respects to their elders, past and present and any elders with us this evening.

I am delighted to join you here, to deliver this Dean's Lecture.

Well, sort of delighted.

I was full of enthusiasm when I received the invitation. But then I actually thought about it. I have no expertise on this topic.

Professor Rickards - an old friend, and the one who invited me to speak - comforted me....or more accurately attempted to comfort me .... (shortly before he hightailed it out of the country, I might add) .... by referring me to previous Dean's Lectures to read. He assured me that they would give me the flavour of previous lectures and set me on the right path.

Well, they certainly did give me the flavour: and it was quite picquante!

I saw experts such as Jan van Driel, Professor in Chemical Engineering from Utrecht University, and Professor Anna Sfard, Professor of Mathematical Education at the University of Haifa. And I saw topics such as 'Learning about human learning: How to know more and why we will never

know enough', or, from earlier this year, 'Thinking about the future: Whether, when, why, how, who, what....and so what?'

The expertise of the speakers and the complexity of the subject matter were daunting for someone with only a layman's perspective.

The only clarity for me was that I would not attempt to talk to you from a position of expertise that I do not have. It would not only be inauthentic, but worse, it would be very obviously so!

This is not said with false humility on my part, I assure you. In fact, it is not said with 'humility' at all. I am cautious about expressing humility because I always think of the Israeli Prime Minister Golda Meier's response to her war General, Moshe Dayan, when she presented him with a medal and he said that he was 'humbled' to receive it. 'Moshe', she said, 'Don't feel so humble: you're not that good!'

And so, steering clear of humility, I shall still be realistic and talk to you this evening quite simply from my own perspective: a perspective spread across decades, as a student, a parent, a School Councillor, a Children's Court magistrate and Family Court judge and, in particular, as the Governor of Victoria.

### **AS A STUDENT**

I am well aware that many of us, having been to school ourselves in our long ago childhoods, believe that instils in us great expertise when it comes to the modern day educational needs of our children and of our nation.

I have cautioned myself against that.

I have also cautioned myself to avoid the temptation to start with and linger upon 'When I was at school', save to say that when I WAS at school, it was in the 'olden days', and I am conscious that much has changed.

What has not changed however is that teachers matter the most when it comes to learning. And when a student is lucky enough to strike a particular rapport with a teacher, wonderful things can happen. New worlds can be opened. Lives can change course.

This might be a good time for me to thank Mrs Stirling.

Mrs Stirling nurtured my love for English, for writing, for literature and - although she is no longer here for me to say this to her directly - watching Bell Shakespeare's 'Merchant of Venice' just recently in Melbourne, I was transported back to her charm and enthusiasm in my Intermediate year English class. (The fact that I refer to Intermediate proves to you that I really did go to school in the olden days! 'Year 10', to the younger people present this evening)

What I suspect has changed from my days at school - but possibly still not quite enough - is the early channelling of students into the subjects that reflect their natural strengths. But let me return shortly to the topic of polymaths!

One final word about my own school days. They were **not** -as I hear other people quite often claim - the best days of my life. I enjoyed them but, to my mind, any school that gives its students the best years of their lives has failed. Surely school should help set us up for a future life of many bests.

### **AS A PARENT**

And so, that brings me neatly to my experience as a parent.

Again, I won't linger long here. I think that although a parent is obviously one of the most important elements in a child's school experience, ironically, we can also be the least well informed.

As I have already noted, the fact that we went to school does not qualify us as educators. But nor does the fact that we know our own children better than anyone else, necessarily qualify us to understand best how they work or learn in a group, or at least not with the proficiency that a teacher usually brings to the task. And our expectations might not always be in step with what is reasonable for our child at a particular age or stage.

I recall sitting in our local school's prep classroom at a parent teacher interview early in our elder son's first year at school. Naturally, we were all folded onto tiny 5 year olds' chairs.

After the teacher described her plans for the year for our children, she politely asked if anyone had any questions.

'Yes', said one mother in an assertive voice: 'Why haven't you taught my child to read yet?'

I was really struck by that question. There was just so much that was so terribly wrong with it. Forget the tone, which was 'passive aggressive', (tending towards 'aggressive aggressive'). Forget that it was still quite early in term one of Prep.

It was the shifting of the sole responsibility to the teacher that offended me as just so wrong.

I'm not sure if, without that awkward moment, I would have been as alive to the concept of partnership between school and home as I became when I reflected on why I had felt so offended by that question and that mum's tone of voice.

It made me reflect on how much I appreciated the central role of the teacher, whilst understanding that parents cannot simply abdicate to teachers the full responsibility for their child's education. I became committed right then to the collaboration - the partnership - between parents and teachers, believing it is at the heart of the best education.

As a parent, I learned a great deal from our local school.

I learned about our local community and the importance of immersing our children in it.

We have not lived in that neighbourhood for almost 20 years, but if our now adult children return, many shopkeepers and others greet them by their first names. What a lovely legacy from primary school.

I also learned how much interested parents can contribute to their children's schools, whether in terms of their time, their skills or support.

There are the mums and dads who help to run school programs that simply could not be run without them. Those who turn up for the working bees that significantly improve the school infrastructure and the ones who volunteer in the office to free up resources in other parts of the school.

And there are those who, like me, are serial recidivists when it comes to volunteering for crèche, kindergarten, primary and secondary school councils, to hopefully lend governance skills to organisations that are often too small to buy in that expertise. It was a wonderful way too for a full time working parent to stay in touch with the place where her children spent so much of their time.

### **AS A CHILDREN'S COURT MAGISTRATE AND FAMILY COURT JUDGE**

I intersected often with schools and teachers in my professional life, having been a Children's Court magistrate many years ago now, and as a judge in the Family Court of Australia for the last 18 years of my legal career.

In that latter role, I dealt with disputes where parents were not capable enough to get their children to school, where children had faced the disruption of 16 or 17 changes of school, or where school was just another battleground for warring parents.

Some separating parents asked the court to intervene when they could not agree on which school would be right for their child, as between: state and private, special and mainstream, single sex and co-ed, secular and non-secular, or sometimes just between two fantastic schools where the child would be fortunate to attend either one ..... if only it weren't a fight between his or her parents!

And then of course the extra-curricular options opened a whole new ground of battle as well.

I quickly realised though, that school can in fact be the one safe place for some children: teachers the one safety net.

It might just be the place free from the sort of parental conflict I have described, the one place where a child can be assured of a nutritious breakfast, the place where he or she can find positivity, or the place where serious family issues can be detected and the child protected.

## **AS GOVERNOR**

### **The Role**

But it is certainly as the Governor that I have learned more about education than at any other time in my life. It is the beauty of the breadth of this role and all that it brings into focus for us. The role of Governor is traditionally described in three main parts: constitutional, ceremonial and community.

The **constitutional** part involves the protection of the State Constitution, and I am left in no doubt that, as a community, we could certainly be better educated about our system – one of the longest continuous democracies in the world.

We need our youngsters to understand all the checks and balances built into our system, lest they unwittingly allow those protections to be eroded.

The **ceremonial** part of the role includes presiding over important occasions and ceremonies such as ANZAC Day and Australia Day, or the investiture of Australian honours.

Again, I am keen to emphasise the need for our young people to learn of the significance of such occasions and awards.

If we remember where we have come from and what has been sacrificed for us, we are better equipped to know where we must head and what we must contribute to those coming behind us.

If we contemplate our heritage, our first peoples and the waves of migrants that comprise our nation today, we might be at our best in respecting the differences of all those who live side by side.

If we understand our Australian honours system, we might better understand the goodness, the cleverness and the generosity of others, and in turn be inspired to make similar contributions.

The third part of the role is about the **community**. The Governor, from an apolitical position, represents all Victorians, and works to be a cohesive force across suburbs and regions, age groups, occupational groups, interests and community organisations, promoting diversity of every sort.

I have the privilege of thanking and congratulating those who do great work, whether by clever industry of global import, or generous volunteering at the most local level.

From what I see, schools in Victoria generally do an excellent job exposing their students to volunteering and altruistic pursuits in their local and the wider communities. It is something I see emphasised in every school that I visit, whether via programs that bring the youngsters into close contact with seniors at nearby centres, planting trees for Landcare, or as St John's trainees, for example.

In modern times, there is a fourth and significant part of the role. That is, in promoting every aspect of Victoria's **international engagement**.

Victoria simply cannot flourish if isolated from trade, investment, culture, innovation and, importantly, collaboration with the wider world.

In a disrupted environment, innovation is key, and to succeed in a globalised economy, it must be on a global basis.

It is through our community and international engagement that I have most recently been exposed to and contemplated aspects of education previously less known to me.

### **The OECD**

First, in late 2015, I had the privilege to meet with and listen to researchers at the OECD in Paris, discussing how countries around the world were rated on different aspects of education.

They described to us that Australia's rating was high when it came to equipment available to its school children.

It stands to reason. We are a relatively wealthy country, and although we may lament a lack of perfect school infrastructure across the board, or a fully equitable distribution of equipment and devices, we are, overall, comparatively well off in those regards.

And yet, we are not ranked commensurately at the top of international results. It is, it was explained to us – and as many of you in this room would readily understand – a complex equation. There are many factors at play.

Certainly, the skill of the teachers is considered an essential element when it comes to the educational results of a nation.

Equipment can add to the learning process, but it is unlikely to ever supplant the primary learning model of teacher and student. The importance of teacher training is not something that I need to emphasise in this setting.

### **Teaching in Victoria: Wooranna Primary School**

I know that in Victorian schools we are blessed with fine teachers and many outstanding examples of successful teaching methodologies.

I saw an inspiring example of the impact of exciting, engaging and engaged teaching at Wooranna Primary School in Dandenong.

I was struck, first, by the leadership. Long time Principal, Ray Trotter, was a facilitator for his teaching staff. He enabled them to incorporate technology into non-traditional classrooms in order to facilitate the children's self-directed learning. It was clear though that their 'self-directed' learning was skillfully guided by teachers who were fully engaged with each student.

Students chose what they wanted to study, and set their own educational challenges, which they then met through cross-curriculum and collaborative study across the age groups.



One young student - Grade 5, I think - recently arrived in Australia, told me about his research into the guinea-worm. When I asked why he had chosen that as his learning area, he explained he had been motivated by the suffering he had seen in South Sudan. He was confident he would study medicine at University.

In 2009, Deakin University recognised the Wooranna Primary School Principal's approach with the opening of the Raymond Trotter Flexible Learning Space, a centre designed to give student teachers more classroom teaching experience but also, and importantly, to challenge the traditional methods of education.

### **The Sutton Trust**

Last year, I was fortunate to visit the Sutton Trust and Education Endowment Foundation, as part of an official visit to London. Those organisations are jointly designated as the UK Cabinet's 'What Works Centre' on Educational Achievement.

Their remit is to run randomised controlled tests and specifically designed pilot projects, to generate evidence of what works to improve educational outcomes for children, particularly those from disadvantaged backgrounds.

The tests and projects are independently evaluated, (with the results made publicly available), in order to identify ineffective interventions, and so that the effective interventions can be scaled up.

What was interesting to me, as a layman, was to see some of what would popularly be accepted as fact, being tested.

For example, that smaller class sizes or more homework could in themselves be the answer or part of the answer to better outcomes.

Instead of relying upon such assumptions, a 'Teaching and Learning Toolkit' has been devised. It assists schools to evaluate their programs by measuring the average impact on attainment, the strength of evidence supporting them, and the cost.

In that way, the best use of limited resources, based on well informed discussions, can be ensured.

## **STEM**

I want now to turn to the teaching of STEM (science, engineering, technology and mathematics).

When it comes to equipping our children for the future, right now there is no discussion that does not include STEM.

This is certainly not unique to Victoria or Australia. We have just returned from an Official Visit to India. STEM was described to us by one leading scientist as every parents' idea of the best passport to give their children.

I feel guilty that, until recent years, I did not think a great deal about STEM, but I am probably just a product of my generation.

And, in 'my time' we were channelled early into focused areas of study. Because I showed a natural aptitude for the humanities, that is where I was sent.... as it were. And, as I have already mentioned, my interest in and enthusiasm for literature were encouraged and nurtured by positive teachers and then, in turn, by the sound results that followed from the confidence founded on their encouragement.

I cannot say that I was actively discouraged from the sciences. But I was not dissuaded from an early lack of interest: neither by exciting teaching, nor by any re-direction as to the importance of pursuing those areas of study for a well-rounded education.

I am not critical of my school, my teachers, my parents or even of myself for pursuing such a narrow course of learning. I am, as I said, a product of those times, and in the 1960's I was going to be able to fare perfectly well in a narrow and linear career in, as it turned out, the law.

And of course, it was the norm then for the majority of girls to pursue the arts rather than science.

Times have changed dramatically in the almost half a century (gasp!) since I was choosing subjects in high school.

However, we now know that Victoria - a State without vast mineral resources upon which to rely, and one no longer able to depend on traditional manufacturing - will be left behind, unless we ensure that our students are equipped for what is referred to as Industry 4.0 or the 4<sup>th</sup> Industrial Revolution.

We know how the workforce has changed, is changing and will need to keep changing.

We know too that a school leaver today is likely to have as many as 17 different employers in their lifetime and up to 5 different careers, and that the national average tenure of a job is less than 3.5 years.

If we are looking at changes, research from the Committee of Economic Development of Australia tells us there is a 'high probability' that 40% of Australia's workforce could be replaced by automation in 10 to 20 years.

Yes, even judges could be automated!

I remember when this idea was first raised, with the suggestion of a computer to replace judges - at least in Family Court cases involving property and financial settlements - it seemed just fanciful: like science fiction.

We do know however that the capacity for cognitive computing has been developed and is improving. It is bound to impact on the likes of company audits, tax advice, discovery and conveyancing.

It is unlikely to bypass court decision making in the future. Feed in the data and feed out the answer. Most decisions do need more by way of human observation and discretion, but some will not.

When it comes to a changing workforce, we must also remember that it is projected that 65% of today's students will be employed in jobs that don't yet exist. And, that 75% of the fastest growing occupations will require skills and knowledge in science, technology, engineering or mathematics.

This is far from new news to the experts in this room.

Prominent figures in business and education have spoken about it for some time now.

Catherine Livingstone AO, for example, when she was Chair of the Business Council of Australia, called for us to recognise Australia's sub-optimal performance in teaching STEM and computer literacy. She advocated a 'greater emphasis in primary and senior school on the STEM topics to enhance employability in the fastest growing occupations'.

We do see pockets of change in our schools in terms of what and how we are teaching. It is encouraging. But there is still much work to be done, particularly with girls. We know that only about 16% of STEM qualified Australians are women.

A cause for celebration is that this university is the home to The Science Gallery, (one of a small network in the world started in Trinity College Dublin, and with one now being built in King's College London, at the Indian Institute of Science in Bangalore, at Ca' Foscari University in Venice and in Detroit at Michigan State University).

It is a gallery specifically designed to attract 15 to 25 year olds to the study of science, technology, engineering and mathematics, by helping them to recognise the inevitable 'creative collisions' between the arts and science.

It is a huge feather in the cap of this university, and Victoria, to be a part of this network.

Although the spectacular physical space of the gallery – on the corner of Swanston and Grattan streets – is not yet built, I recently had the honour to open the Gallery's first exhibition, called 'Blood: Attract and Repel'.

Modelling the best of international collaborations, it includes works from Science Gallery Dublin and simultaneous programming with Science Gallery London.

Promising that it would prompt us to ‘consider what it means to be human, to be infected, to be ‘other’, to smell, bleed, feel, taste, listen, pump, pulse and learn’, it did not disappoint.

*Pulse Index*, for example, is a biometric installation that records participants’ fingerprints and heart rates at the same time. Visitors place their finger into a custom made sensor, equipped with a digital microscope and a pulsimeter. The data for the last 10,925 participants is then displayed, wrapping the room in what looks like a skin covered spiral.

The exhibition is a model of ingenious ways to attract young people to the sciences, particularly girls who, the research shows us, are more interested in STEM studies when they can see the potential for a worthy application, or when they can understand its application to other disciplines.

The University of Melbourne’s Vice Chancellor, Professor Glyn Davis AO, succinctly described the beauty of cross-disciplinary study when he said:

‘When science and art collide, the light produced helps us see better challenges we face. Leonardo da Vinci recognised this power, achieved when two divergent disciplines strike against each other.

He continued:

‘The result can be a crucible of creativity to inspire interest, propel engagement, and encourage research.’

I agree. Perhaps it is time to revisit scientist and novelist CP Snow’s famous ‘Two Cultures’ essay, delivered almost 6 decades ago. Snow argued that to further the progress of human knowledge, and to benefit society, practitioners in the arts and the sciences had to build bridges over the cultural divide between them.

I mentioned polymaths a little earlier. Think of Leonardo da Vinci: painter, sculptor, architect, musician, scientist, mathematician, engineer, inventor, anatomist, geologist, cartographer, botanist and writer.

Think of what his multi-disciplinary genius gave to the world. We shall need to see more of that!

### **International Engagement /Collaboration**

Finally, as Governor I have seen the importance of international education.

First, it is Victoria's biggest export service industry. At the end of 2016, we had 220,750 international students studying in Victoria. And we rank in the top five cities in the world for the international student experience, (with Montreal, Paris, London and Seoul).

And we are well equipped for our international students: voted the world's most liveable city for the 7<sup>th</sup> consecutive year, a State with an emphasis on education, a multicultural State with almost half of us being born overseas or having at least one parent born overseas, with 260 language groups, and with a Welcome Desk at Melbourne Airport and other infrastructure to welcome and take care of our students from overseas.

But international education is about so much more than exports.

It opens up opportunities for international collaboration.

In our schools, we see networks of sister schools that enable children to communicate with and undertake studies with their contemporaries in other countries.

But nowhere is it more apparent than in our universities.

I have referred to the example of the network of Science Galleries, bringing together arts and sciences for youngsters around the globe. But there are very many more examples.

For its part, Swinburne provides an example with its Swinburne Design Centre Melbourne, which joins students, research leaders, industry partners and entrepreneurs to solve complex problems and generate innovative design solutions to them.

It was developed in collaboration with the world's first Design Factory at Aalto University in Helsinki, and The Design Factory Global Network now includes centres in China, Chile, Portugal and the Netherlands.

The original Aalto Design Factory pioneered a radically new approach to teaching product and service development by bringing leading business and design scholars, and different disciplines to collaborate not only with each other but with teams overseas as well.

It is just one example of a teaching methodology that we are seeing throughout our universities.

The collaboration between Monash University and China's Southeast University in the city of Suzhou in Victoria's sister-state of Jiangsu province, gives us another example.

The Southeast University-Monash University Graduate School is located in Suzhou Industrial Park, home to almost 3500 international companies, including more than 100 'Fortune 500' companies, and truly one of the most dynamic research and industrial sites in the world. It is aptly described as 'a hub of 21st century brainpower'.

Joint Graduate School students can achieve a masters degree from both universities, and can undertake, for example, high level bio and nano technology or advanced manufacturing research at their Joint Research Institute.

And we see landmark international partnerships such as Deakin University's agreement with Greg LeMond – a three-time Tour de France winner and the founder and CEO of LeMond Composites – to allow LeMond Composites to license technology developed by Deakin's world-leading carbon fibre research centre, Carbon Nexus.

And, the specialised carbon fibre production machinery for the plant will be manufactured by Furnace Engineering in Clayton, Victoria.

The upshot of all this is two-fold.

First, our students learn the worth of collaboration. It is not only fundamental to success in almost any endeavour, but the big issues will most certainly not be conquered without it.

Secondly, our children and young people are – as they must be - educated as global citizens.

In this role, I see many of the thousands of students coming to Melbourne to study, whether little primary school children from our sister province of Jiangsu in China, or university students from all over the world and particularly our immediate region.

I also see our own Victorian school students studying in China, and university students on various scholarship schemes and exchanges in various parts of the world.

They are all our future global citizens. Their international exposure is important. It is hard to imagine that our economy and culture can flourish without the next generation's acute appreciation of language, engagement and understanding of colleagues in other countries.

## **CONCLUSION**

Victoria's State motto is 'Peace and Prosperity'. I always interpret that widely: well beyond 'peace' just representing a lack of fighting or disagreement, or 'prosperity' simply meaning wealth.

For true peace and prosperity shared by us all, we depend on the transformative nature of education.

Peace is enhanced when the barriers of fear are broken down, when we learn more about each other, study side by side and see each other's strengths.

And prosperity is better assured when everyone shares in the opportunities of a lucky country. And nothing could be luckier than an environment where education is valued and every child is offered equal access.

And it is because of that conviction that I was prepared to share what I know is just a layman's observations of education in our State.



Thank you. And I wish you all Peace and Prosperity.