

Research ties in Latin America

Engagement between Australia and Brazil is leading to many significant developments in learning, teaching and research in higher education. By Liz Banks-Anderson.

ENGAGEMENT AND RESEARCH

The relationship between Brazil and Australia is developing into a strategic one as both countries discover the similarities, challenges and common opportunities they share.

The Higher Education sector represents a key opportunity to forge closer ties with Brazil and Latin America more broadly, according to Professor Susan Elliott, Deputy Vice-Chancellor (Engagement) at the University of Melbourne.

"Both countries are globally recognised for their expertise in research in agriculture, science and technology," she says, "and both Australia and Brazil are home to world-class universities and think-tanks recognised for their research excellence."

A University delegation led by the Vice-Chancellor Glyn Davis will attend the Brazil-Australia Dialogue in São Paulo in March, demonstrating the University's distinctly international outlook.

Engagement between Brazil and Australia is also reinforced through each country's educational priorities, exemplified in the Science Without Borders (SWB) program. The program is the principal scholarship scheme of the Brazilian government and seeks to strengthen and expand science, technology, innovation and competitiveness through international mobility of undergraduate and graduate students and researchers. It aims to send 100,000 Brazilian students and researchers to top universities worldwide until 2014.

"Programs like Science Without Borders help to promote links between countries and cross-cultural understanding," says Honorary Consul of Brazil to Victoria, Roger Frankel. "And living and studying in foreign countries broadens students' horizons, offers a deeper understanding of another country and creates networks which in many cases are life-long."

The SWB program is helping strengthen ties between the two countries through research, providing a strong foundation for research collaboration on shared challenges.

"We welcome students participating in the Science without Borders Program and the diversity they bring to the classroom," Professor Elliott says. "The program also enables us to strengthen our existing partnership with the University of São Paulo and opens up opportunities for future research collaboration."

Professor James McCluskey, Deputy Vice-Chancellor (Research) at the University of Melbourne, says the University is dedicated to nurturing ties with international partners.

"Research collaborations present a significant opportunity to improve the quality, scale and impact of our research, increasing the likelihood of major advances. We are keen to develop a strong research relationship with Latin America, starting with Brazil, which we have targeted as a priority."

The SWB program will also provide opportunities to gain an understanding of the research environment at the University of Melbourne, with undergraduate students from Brazil completing study abroad programs at the University.

For Lucas Paixão, studying Electrical and Electronic Engineering at the University has been a valuable experience.

Mr Paixão believes SWB is an 'amazing program' through which he has been improving his personal skills, gaining professional experience and also networking with people from all continents.

Like all life-changing experiences, there have been challenges including overcoming the distance from family and friends, however, he says the most positive aspect of the experience has been gaining maturity, independence, English proficiency, and experiencing multiculturalism and a different way of learning and teaching.

Mr Paixão believes his area of studies in Embedded Systems will contribute to his field of research back at the Federal University of Campina Grande in Brazil, reinforcing the program's aim to be a catalyst for joint research projects and increased research networks between both countries.

"It is clear that when international students come to this country, it represents a unique opportunity to have them working together with Australians, sharing knowledge, coming up with new ideas and solving current problems," he says.

"That's why engineering exists: to propose viable solutions to meet humanity's needs."

Efforts to develop ongoing relationships in Latin America began last year when Melbourne hosted the inaugural Latin America Dialogue during which Chairman of the Council on Australia Latin America Relations (COALAR) David Luboff confirmed the University of Melbourne and the Australian Embassy in Brazil had been granted funding from COALAR to present the Brazil-Australia Dialogue in partnership with the University of São Paulo.

That event will be comprised of two distinct streams – international relations and research collaboration – which will run in parallel in March and highlight the increasingly prominent role both nations have in global affairs.

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Gardens in the sky



One of the Demonstration Green Roofs at the Burnley Campus. Photo: Les O'Rourke.

The University of Melbourne and the Lord Mayor of Melbourne recently launched Australia's largest Green Roof research and outreach project at the University's Burnley Campus near Richmond. Nerissa Hannink reports.

RESEARCH

As city living becomes denser and warmer, innovative ways to keep cool, increase green space and keep urban areas attractive are always in demand.

Since 2008, researchers at the Melbourne School of Land and Environment (MSLE) have been studying the best conditions to grow plants on Australian roofs – known as Green Roofs – to make the most of these 'natural air conditioners'.

A team led by Nick Williams and John Rayner has now established the Burnley Green Roofs Project, which demonstrates many of their research findings – showcasing the best plant species and specially designed soils to use on city roofs and demonstrating how green roofs can recycle storm water and reduce building energy use.

The project comprises three roofs located on the main campus building, which cover 300 square metres at an

average of seven metres off the ground. The green roofs were designed by a multi-disciplinary team including MSLE staff and led by design practice HASSELL. The main focus of the roofs is to facilitate small group teaching, undertake research and demonstrate the variety of green roofs available to the building and development industry.

Dr Williams says Green Roofs have a range of environmental benefits that could help adapt Australian cities to climate change, as well as social and economic benefits that could make denser cities more liveable and attractive.

"Cities suffer from the urban heat island effect which makes them up to four degrees warmer than surrounding areas. Green Roofs can help overcome this by reflecting the sun's radiation and providing shade or evaporative cooling as well as dramatically reducing a building's energy costs, trapping dust and pollutants and dampening noise. They also provide significant benefits in reducing stormwater runoff," Dr Williams says.

The first of the three Green Roofs is a large demonstration garden consisting of 14 different green planting zones including grasses, flowering plants and a vegetable garden, all linked by a distinctive red line. This main roof has a range of growing and irrigation treatments to showcase how beautiful and multi-functional green roofs can be.

The second roof is dedicated to research that aims to quantify the environmental benefits of Green Roofs and plant performance. The third is a biodiversity roof,

comprising a range of habitat features to encourage and sustain local wildlife.

In 2008 the research team at the Burnley campus was the first to build a Green Roof for research in Australia, which, although significantly smaller revealed a 38 per cent reduction in summer energy use.

"Green Roofs act as a sponge reducing storm water runoff and potential flooding while lowering local temperature through evaporative cooling," Dr Williams says.

"We also want to use the biodiversity roof to understand how city roofs can be used to provide habitat and act as 'stepping stones' to link fragmented urban wildlife habitat. This roof includes local native plants that are food sources for caterpillars, an intermittent stream and sticks for native bee habitat."

Despite the many benefits of green roofs, and their popularity overseas, they are not common in Australia.

Mr Rayner from the Melbourne School of Land and Environment says the aim of the Burnley Green Roofs Project was to illustrate what is possible, from non-irrigated succulent beds to deeper, productive vegetable gardens.

"Green Roofs are functional and beautiful spaces that can be built new or retrofitted to existing buildings. Planning and design are key components to successful Green Roofs and the Burnley Green Roofs are an example of this," he says.

"We wanted to display a range of plants that can be successfully grown, but many need a certain depth of growing medium. Given we can't use a heavy soil on

a roof we developed lightweight growing media, together with foam building blocks to create raised beds.

Much of the growing media is recycled, including crushed roof tiles and ash waste from power stations as well as scoria, a lightweight volcanic rock.

"We also wanted to maximise the plants and vegetation on the roof while maintaining access, so there are shallow planted areas beneath grated metal walkways."

The main demonstration roof is approximately 166 square metres and includes over 3000 individual plants from more than 200 different species. For over a year team members including Sue Murphy, Claire Farrell, Jenny McCoy and Annette Warner selected and raised plants in the Burnley nursery to ensure a wide variety would be ready for use on the roof.

Such a significant roof structure required inventive design solutions that were provided by the design team at HASSELL and the landscape contractors Jungleyf.

Many elements of the roof were pre-fabricated and test assembled off-site, then transported and reassembled on the rooftop – representing innovation in design, research and construction process, according to HASSELL's Stephen Tan.

Ongoing research and the design lessons from the Burnley Green Roofs will now be used to provide technical knowledge for architects, landscape designers and public policy makers to install green roofs in Australian cities.

www.land-environment.unimelb.edu.au/expertise/sustainable-cities/girg/

Fortune favours the bold

Helping others and taking risks are keys to success for 2013 Lawyer of the Year winner and Melbourne Law School graduate Annesley DeGaris (LLM 1992). By Monique Edwards.

ALUMNI

Achieving justice for people has been the biggest reward for Annesley DeGaris throughout his law career, from protecting consumer rights to litigating environmental contamination in neighbourhoods.

Mr DeGaris says special interest groups in the United States – where he is from originally and where he works – continually attempt to control people's access to justice and the legal system and there is not the large bureaucratic system to monitor unscrupulous or dangerous business practices there, as there is in other industrialised countries.

"We are much more reliant on private rights of action enforced through our legal system to protect individuals. The type of law I practise is essentially the front line defence in protecting those who are most often unable to protect themselves," Mr DeGaris says.

His passion for giving a voice to the voiceless has been honoured with this year's Lawyer of the Year Award.

"I think these awards are especially significant to me because it is a commentary on what your peers, which in this case would also sometimes include my adversaries, think of you as an attorney," Mr DeGaris says.

Mr DeGaris was recognised in the categories of Mass Tort Litigation/Class Actions and Personal Injury Litigation (Plaintiffs). Winners were chosen based on peer-review assessments.

Even after receiving many accolades in the United States, Mr DeGaris still considers the Rotary Foundation Scholarship for International Understanding in the early 1990s to be one of his most significant awards.

The scholarship placed him overseas at Melbourne Law School where he focused



on studying International Law.

"I chose Melbourne because the faculty at the law school impressed me, as did the curriculum. The faculty members, including Malcolm Smith and others, were some of the most intriguing academics I have ever been fortunate enough to study under."

Many of his best memories come from the people he met in the faculty as well as at Trinity College.

"Being a few years older than the average student, I was impressed with the number of well-rounded individuals I met there," Mr DeGaris says.

Returning to the United States to reunite with family, his studies in Melbourne continued to play an important role in determining career goals. He would eventually go on to be a founding partner in a Birmingham, Alabama firm dedicated to areas that include personal injury and environmental litigation.

Despite the distance, Australia continues to pop up in his law career. A product liability suit involving a defective drug recently brought him back to Melbourne and later to Adelaide to take testimonies from an expert in the field.

Additionally, one of his recent guest speakers at Cumberland School of Law, where he is an adjunct professor, was a

barrister from Melbourne. Mr DeGaris met the barrister, Robert Heath, while he was at Trinity College and they have remained in contact.

Mr DeGaris is now teaching law, working on an article as well as a book project, not to mention a number of legal cases. Two of his recent cases involve recalled hip devices where he represents hundreds of individuals.

"It's a very compelling litigation as most of my clients suffered tremendously and underwent revision surgeries to remove the defective devices," Mr DeGaris says.

With a schedule filled with cases, projects, and teaching, he continues to find ways to balance family life and also travel.

"At some point in the future it would be interesting to return to Australia for more than just a visit. An academic position, such as a guest lecturer or visiting professor would be of interest," he says. "I do have plans for an extended vacation with my family in 2014. I want my family to experience Australia, especially Melbourne."

Mr DeGaris offers some insight for prospective and current law students.

"Finding the right practice area is about being open to all areas of the law and investigating these areas through the law school's curriculum. If conflict is something you find particularly distasteful, then it's probably not your calling to be a litigator. If you are intellectually curious then a position in academia is something to consider."

If he could travel back in time, Mr DeGaris also has some advice for his younger self.

"I would tell him not to be intimidated by change and take more risks. Fortune favours the bold. I also would say ability without opportunity is wasted ability and opportunity without ability is wasted opportunity. You must hone your abilities and constantly look for opportunities."

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