EXCELLENCE IN RESEARCH FOR AUSTRALIA (ERA) RANKINGS

As most of you will now know the ERA rankings were released recently and the University has achieved some outstanding results from the research assessment exercise conducted by the Australian Research Council.

In two fields, Electrical and Electronic Engineering, and Food Science, Victoria University was rated above world standard. VU was also rated as being at world standard in Applied Mathematics, Human Movement and Sports Science, and Performing Arts and Creative Writing, as well Biomedical and Clinical Sciences (2 digit FOR code).

In many of the other research fields VU achieved rankings that provide a strong foundation for future development. Although there were some disappointments in the rankings, overall this is a good result for the University, and we will be examining the data in more detail to develop strategies for building on our strengths and developing areas that show promise.

The University was not ranked in a large number of other research disciplines because of the low volume of research output, however, we know that we have strong researchers in some of these disciplines.

VU now has to begin preparing for the next ERA submission. This will happen in 2012 and will report publications over the period from 2005 to 2010. Many of the investments and policy initiatives such as the PRIP scheme and quality weighting the RAI policy should stand VU in good stead to do even better in 2012.

There will be further review and refinement of research policies and strategies with a view to improving performance in future submissions.

Congratulations to all staff who contributed to the research included in the ERA submission or assisted in compiling the submission.

BREAKTHROUGH ON PREDICTING COLD DAMAGE IN ORANGES: VALUE FOR ORANGE EXPORTERS

Research that spans almost 10 years has now come to fruition. Associate Professor Mary Millikan’s research students have developed a method for predicting cold damage in oranges prior to the appearance of physical symptoms. This is an important finding for the orange industry in that it reduces the holding time before oranges can be assessed for export.

The current practice is to store the oranges for six weeks after a frost or cold damage event has occurred and then they are sorted by density. Damaged oranges are not suitable for fresh fruit and are lighter weight so they are used for juice, while sound oranges are available for export. Inside a damaged orange there are some dry segments, which vary according to the extent of the cold or frost damage.

Two PhD students and two research assistants have worked on this project. The initial PhD project was funded by three external sources: Pacific Fresh Pty. Ltd, Murray Valley Citrus Board and Colour Vision Systems Pty. Ltd. The current student has been partly funded by a Faculty of Health, Engineering and Science Scholarship.
SCHOOL CENTRES FOR TEACHING EXCELLENCE

A major research grant has been obtained by the School of Education to establish two School Centres for Teaching Excellence (SCTE) in partnership with primary and secondary schools in the western and northern regions of Melbourne. Each of the Point Cook Precinct and Hume Precinct programs will receive $250,000 to strengthen the school-university partnership in terms of extending high quality pre-service teacher education, continuing professional learning and expanding educational research opportunities.

Funding has been allocated by the Department of Education and Early Childhood Development (DEECD) in Victoria as part of the Federal program for Smarter Schools National Partnership on Improving Teacher Quality. The grant has been awarded to Associate Professor Bill Eckersley, Dr Neil Hooley and Dr Greg Neal.

Partnership-based pre-service teacher education has been developed by the School of Education over many years and inclusion of a precinct model within this context is an exciting innovation and next step. Funding will enable the employment of a program manager and research officer at each precinct over a two-year period who will work with a university co-ordinator and teams of principals and teachers.

A program co-ordinating committee will involve representatives from each of the two DEECD regions concerned. Both precincts will continue the trend at Victoria University of placing larger numbers of pre-service teachers in schools and in teaching course units on-site. This enables immersion of all participants in professional practice and a theorising of professional practice throughout a program of study. School teachers acting as mentors for pre-service teachers are crucial elements in this process.

Each precinct has its own characteristics and imperatives on which the research program will be constructed. These include investigation of a young adult environment in the senior years, a middle years approach to schooling, the role of pre-service teachers in contributing to and learning in schools and the incorporation of information and communication technologies including video pedagogies.

Hopefully, the precinct model can be expanded to encompass more sites throughout Victoria and as questions of resources, personnel and sustainability are better understood. The researching and theorising of professional teaching practice from a position of practice will be a major contribution that the centre will make.

GERMAN COLLABORATION FOR FRENCH RESEARCHER

Post-doctoral Research Fellow Dr David Rouffet was recently awarded an internal grant to develop a cycling performance project in collaboration with the German Sports University (GSU) and the Victorian Institute of Sport (VIS).

The first aim of the project is to analyse the control operated by the brain on muscle coordination and mechanical variables of performance in cycling.

With the help of Dr Stefan Schneider (GSU), Dr Rouffet will measure simultaneously the electrocortical activity of the brain and the electromyographical activity of the muscles during cycling.

“I went to Cologne last December to undertake the first part of the experiment. It was my first time in Germany, even if I am French,” Dr Rouffet says. “Dr Schneider will come to Melbourne at the end of March for a second experiment and it is a great pleasure to work with him.”

The second aim of the project is to measure mechanical variables of performance in cycling in real conditions. Dr Rouffet will collaborate with Dr Dan Dwyer (VIS) to measure mechanical variables (i.e. torque, cadence and power output) while cyclists ride on a velodrome.

Cyclists from the National Talent Identification and Development (NTID) Program and VIS track squads will take part in the project.

“We are hoping that the scientific approach will contribute to a significant enhancement of their performances and will help them to become great champions.”

INTERNATIONAL ARTS RESEARCH COLLABORATION

“Trouble with democracy: performance without appearance” is the first of a projected series of collaborative performance pieces developed as part of an ongoing research collaboration between Dr Elizabeth Dempster of the School of Communication and the Arts and visiting performance artist and researcher Ms Mine Kaylan of the University of Brighton, UK.

The research project critically examines collaborative methods of cross-disciplinary and cross-cultural live art production. The inaugural work, in the form of a performative seminar, was presented at VU in December 2010 to an audience of VU staff, postgraduate research students and local artists.

INTERNATIONAL PERFORMANCE RESEARCH

Choreographer and PhD student Russell Dumas was invited to present Dance for the Time Being at the Baryshnikov Arts Centre, New York, in October 2010. Performing in Dance for the Time Being with Dance Exchange was Performance Studies lecturer Dr Christine Babinskas, from the School of Communication and the Arts, during a period of Long Service Leave in semester 2.

The New York performance followed an extensive rehearsal period at a private studio in France with informal performance of the work and participation in a week long workshop with dance practitioners at the Cable Factory, a dedicated inter-disciplinary arts facility in Helsinki, Finland.
NEW EQUIPMENT FOR ISI

A new Scanning Electron Microscope (SEM), supported by the University's research block grant funding, has arrived at the Institute for Sustainability and Innovation (ISI). It has been partially set up, however, commissioning has not been completed because there is a wait with room modifications and some accessories.

The instrument will be housed in its own room (Building 2 room 2251, Werribee) due to potential interferences and the sensitivity of the instrument. Commissioning will involve testing the instrument to ensure its performance is satisfactory, particularly in terms of resolution.

Training will be made available once the instrument has been commissioned and when a user has some samples ready for analysis.

A seminar on the theory behind SEM analysis and what can be achieved is being planned. All potential users are encouraged to attend this seminar.

![Scanning Electron Microscope (SEM)](image)

VU RESEARCHERS START HI-TECH CLUB FOR YOUTH WITH ASPERGER'S SYNDROME

A Victoria University research team is opening a hi-tech learning club in Footscray for young people with Asperger’s Syndrome after studies showed online interaction improved their social skills.

In what is believed to be the first of its kind in Australia, the not-for-profit space, called The Lab, will cater for eight local Asperger’s youth with an interest in computers and design.

They will learn from computer programmers and designers who are already working in the space, developing virtual world technologies for VU, Monash University, Canberra Institute of Technology and private companies. These technical experts will work with the young people on a one-to-one basis.

VU Work-based Education Research Centre (WERC) senior educator Stefan Schutt and technical manager Dale Linegar, who have worked with Asperger’s youth in Melbourne and Gippsland, are readying the space for opening next month.

News of the learning club was revealed in a story on page 9 of the Sunday Age on 20 February.

“Through a research project with VicHealth last year we noticed how young people with Asperger’s Syndrome seem to gravitate towards the use of technology,” Mr Schutt said.

“Kids with Asperger’s often have very high IQs and they’re really gifted but they don’t have the social skills that most other kids do. They can be dysfunctional in the real world, but when you put them in front of a computer they’re fantastic.”

Mr Schutt said the study found that online technologies gave those they worked with the confidence to learn about social interaction because it was seen as safe, mediated and not as confronting as face to face contact. They also valued the chance to meet others with the condition.

“The skills of these kids are not being recognised and they end up falling through the cracks. They’re not being nurtured and the energy gets misdirected and they have all kinds of problems at school. If their talent is channelled in the right way they will end up being a real boon to society in terms of what they can offer.”

Mr Schutt praised Mr Linegar for getting the project off the ground. The pair plan to run the club for “at least five years”, with the possibility of support from the Inspire Foundation.

Mr Linegar said he hoped the space would provide an environment where young people could teach and learn from each other, as well as from the technical experts.

“It’s about providing an ‘object of affinity’ for these kids, in this case technology, which they can chat about and analyse together,” he said. “The most positive thing is showing the families of these kids that they are talented.

“When we told the mother of a 12-year-old boy that he is really smart and could succeed in life with the right support, she cried because nobody has ever told her that before.”

NEW RESEARCH GRANT TO WEIGH UP THE OPTIONS FOR OBSESE CHILDREN

Three researchers from ISEAL and SES have been awarded a $24,150 grant from the Jack Brockhoff Foundation for a study to determine the most effective exercise interventions for obese adolescents.

The project, ‘Treating obesity-related movement restrictions in clinically obese adolescents to improve their metabolic, physical and mental health’, will be carried out by exercise psychologist Dr Erika Borkoles, physiologist Dr Suzanne Broadbent and biomechanist Ms Tuire Karaharju-Huisman.

Dr Erika Borkoles says there is strong evidence of the detrimental effects of childhood obesity on the mental and physical health of adolescents.

“Excess weight is one of the most socially stigmatising conditions of childhood,” Dr Borkoles says. “Research shows that obese adolescents are five times more likely to report impaired quality of life than those without weight problems.”

Exercise interventions have been shown to improve both physical and psychological health in adolescents, she says.

“All current obesity guidelines aimed at adolescents recommend an increase in physical activity and exercise participation, but do not provide specific information on the most beneficial type and amount of exercise for children with obesity-related movement problems.

“Therefore, this VU team aims to establish the specific movement limitations and associated problems (e.g. pain) of adolescents with a view to explore the role of adaptive exercise in physical activity participation.”

The six month exercise intervention will be specifically tailored to the movement limitations of these adolescents.
and will provide valuable information about the type, intensity, and frequency of exercise appropriate to their needs.

“This work will serve as proof-of-concept research to a larger randomised control study to inform current physical activity guidelines and physical education class content for these children.

“For example, if the majority of participants in this pilot work report significant lower limb pain due to movement limitations, the implications might be that they should have a specifically adapted physical education class in school that takes into account their current difficulties whilst participating in physical activity.”

VU RAISES HAND FOR RECONCILIATION RESEARCH

Little is known about the attitudes of non-Aboriginal Australians to reconciliation and more research is critical before a referendum to decide if Indigenous peoples should be recognised in the Constitution.

That is the view of Dr Tom Clark, senior lecturer in the School of Communication and the Arts, who says we still have only a limited understanding of non-Indigenous attitudes towards reconciliation in Australia.

“Apart from some very basic statistical research, nobody has taken a deep look at what non-Indigenous Australians think reconciliation is all about, or what it means for them,” Dr Clark says.

“We’re talking about the vast majority of voters in every Australian state and territory. Understanding how they relate to reconciliation could be the critical factor in a referendum campaign.”

The Australian government will this year set up an expert panel to advise it on recognising Indigenous Australians in the Constitution. The panel will report back to the government by the end of 2011 on the best path towards the referendum.

Recent research by Dr Clark and colleagues in Canada reveals a potential way forward for Australia. Canada’s history shares many similarities with Australia’s, including a national apology to Indigenous peoples in 2008.

“The research explores how Canadians understand the issues around reconciliation, using qualitative methods and intensive analysis of the language participants use to frame their opinions,” he says.

The Toronto-based project has begun focus groups with recent immigrants as well as Canadians from long-established families. It finds a wide range of attitudes towards reconciliation, depending on background.

“Detailed analysis of participants’ comments clearly shows that they all agree that reconciliation addresses real issues, even if they don’t agree how to act on it.

“It seems non-Indigenous Canadians know they share a common responsibility for Aboriginal reconciliation in some sense. If we could demonstrate a similar attitude among non-Indigenous Australians, it would give us a much better chance of targeting the referendum campaign appropriately.”

Dr Clark presented a paper on the subject at the Australasian Universities Language and Literature Association in New Zealand on 7 February.

THANK YOU to all who contributed to the content of the Research Matters bulletin.