

ACUR 2013

Abstracts of SPOKEN Presentations

(Alphabetical order of first name of students)

Alex Griffin

University of Sydney

Searching for risk factors in low back pain: insights from a new twin case-control study

Question: Can twins perceptions of the contribution of lifestyle and environmental factors to their, or their twins, low back pain assist in identifying potential causative factors for low back pain?

Design: Twin case-control survey study.

Participants: Twenty-four complete twin pairs (n = 48) from a convenience sample of twin pairs registered with the Australian Twin Registry, aged 18 years and above, and discordant for low back pain history.

Outcome measures: In a telephone survey of approximately 30 minutes duration, open-ended questions encouraged participants to nominate factors that they believed were responsible for the difference in their experience of low back pain to that of their twin.

Results: The most frequent environmental factors reported by participants as contributors to within-twin-pair differences were those related to physical workload or stress of the lumbar spine. The adoption of different types of work was the most frequently reported factor thought to explain these differences (n = 21/24 pairs, 88%), and included work related to heavy loads, lifting, manual tasks, awkward postures and gardening. 21% (n = 5/24 pairs) reported long periods of time spent sitting or standing, 54% (n = 13/24 pairs) reported single trauma or injury, and 63% (n = 15/24 pairs) reported physical activity as factors explaining within-pair differences.

Conclusion: This novel hypothesis-generated study found that risk factors related to the physical workload of the lumbar spine were perceived to play an important role in the development and recurrence of LBP. A challenge for future studies will be to develop methods that capture information on the specific domains of these potentially important risk factors, such as types and levels. These domains are important to improve preventative programs.

Alvin Tan

University of Sydney

Assessing visual perception responses of radiologists to increased prevalence in screening mammography via eye-tracking analysis

Purpose: Recent research has indicated normal visual search mechanisms of radiologists are affected by a range of technical parameters, breast density, lesion subtlety and elevated disease prevalence. Screening mammography presents an unusual paradigm for radiologists as there is a low prevalence of disease. This study examines whether elevating the prevalence of malignant cases in a screening mammography set would affect the performance and search patterns of experienced breast radiologists.

Methods and Materials: In a multi-observer receiver operating characteristic (ROC) analysis study, 8 specialist radiologists each interpreted 2 sets of screening mammograms. The prevalence of abnormality in the second set was greater than that of the first. The additional malignant cases inserted into the second set were of relatively easier detectability than those of the first set and were inserted shortly before cases of greater difficulty to detect, to act as a priming mechanism. Cognitive performance was measured by how well radiologists were able to localise malignancies following a priming case and a self-reported confidence rating of their decision to recall the subject for further assessment. Eye-tracking technology facilitated the retrospective analysis of visual search behaviours during both conditions. Information collected pertained to perceptual interactions with lesions and each mammographic view.

Results and Conclusions: Preliminary ROC scores indicate a trend of slightly poorer performance and preliminary eye-tracking analysis reflects a possible alteration to the normal visual search pattern when radiologists are primed with less difficult malignant cases in the higher prevalence condition.

Amy Lego

Macquarie University

Amazons: Comparative Study of Amazon Mythology in Ancient Literature and Art

“I myself, a helper in war, was marshalled among them on that day when the Amazon women came, men’s equals” - Priam in Homer’s Iliad iii.182-189

Throughout the course of history the Amazons have continued to capture the fascination and imagination of scholars, historians and archaeologists alike. Accounts of these mysterious female warriors can be found scattered amongst ancient Greek and Roman literature. They also featured prominently in the artwork, both public and private, that emerged from these cultures. It is the aim of this paper to explore these representations and develop a clear understanding of the ways in which the Amazon myths were used to

shape and manipulate the views of their relevant audiences. It will also attempt to highlight obvious similarities and differences that emerge from this study. As such this paper will begin by considering the extant ancient Greek literature which offers recounts of these women. It will then consider the ancient Greek iconography available which portrays these women. This will be followed by a reflection of the extant ancient Roman literature, before an overview of Roman iconography and how the Amazons featured in this.

Ann Carrigan

Macquarie University

Expert Performance of Medical Sonographers

Decrements in work performance can have serious consequences in the context of medical imaging professionals. In many countries, ultrasound examinations are reported by a radiologist from a set of static images once captured by a sonographer (ultrasound technologist). Sonographers therefore hold the unique responsibility for detecting pathologies in real-time and presenting relevant images to the radiologist. The negative effects of fatigue on radiologist performance are well documented but no known signal detection studies have been performed on medical sonographers. This study aims to explore if any decrement in clinical performance occurred across time and if this was positively related to spatial, but not verbal persistence tasks and furthermore whether these outcomes were moderated by fatigue. Thirty participants were tested using a repeated measures design before and after a 4 hour working session. To measure clinical performance, a monitor presented fifty randomised ultrasound breast images which varied on whether a cancer was absent or present and on degree of detection difficulty. The participants rated whether a cancer was detected and their decision confidence, facilitating calculation of sensitivity, specificity, ROC and JAFROC figures of merit. For six participants, eye-tracking data was recorded using the Tobii X50 TM remote eye-tracking system. To investigate psychological variables, the participants completed partially unsolvable spatial (spot-the-difference puzzle) and verbal (anagram) persistence tasks. The results revealed that the sonographers' sensitivity, ROC and JAFROC scores were significantly higher after a morning session of work. This suggests that perceptual priming may have occurred. These early findings may have important clinical implications in the domain of medical imaging signal detection.

Audri Biswas

Macquarie University

A High Technology Answer to the Question, "Where am I?"

Localisation and tracking of wireless nodes in indoor surroundings has had a great impact upon the productivity and efficiency of several crucial applications, including fire rescue missions. In complex environments, such as the interiors of buildings and tunnels, localisation of a wireless node can prove to be a challenging task due to the introduction of multipath signals and physical constraints on signal propagation. In such cases, the wireless node remains hidden from the direct line sight of anchor stations due to concrete structures blocking the signal propagation path. CSIRO has developed a platform called WASP (Wireless Ad hoc System for Positioning), which uses a Cooperative Localisation Algorithm to successfully position a hidden wireless node located inside a geometrically complex indoor environment.

In this paper I present the performance analysis of two localisation algorithms of WASP. The performances were evaluated for different scenarios and the results accurately describe the positioning capabilities of the algorithms. The performance of each algorithm was compared to the Cramer-Rao lower bound, which is a benchmark on achievable position error. In the course of analysing the algorithms, an improvement to enhance the performance of Cooperative Localisation Algorithms in complex scenarios was suggested. The paper contains a description of the steps involved in the analysis process along with a derivation of the Cramer-Rao bound for an unbiased estimator.

The scenarios used for algorithm performance determination were based upon the conditions encountered in an outdoor soccer game. The complexities of the scenarios were increased by reducing the network coverage of the anchor nodes. Although outdoor scenarios were considered, the performance determination approaches may be directly extended to indoor localisation scenarios.

Billi McCarthy-Price

University of Western Australia

A Valuable Necessity or a Waste of Time? An Exploration of the Perceptions of Undergraduate Students at the University of Western Australia towards Studying a Language other than English

An overwhelming percentage of Australian university graduates remain strikingly monolingual, despite an increasing internationalisation of higher education. Indeed, the number of enrolments in tertiary Language other than English (LOTE) programs in Australia has been limited in the last decade, even with the growing awareness of the need for graduates to possess an intercultural adaptability and knowledge of foreign languages in order to operate in an increasingly multinational employment environment (Leask & Carrol, 2011). This study aims to explore the underlying attitudes and perceptions of undergraduate

students in the recently introduced new courses of study at The University of Western Australia, towards studying a LOTE. The new courses provide students with the additional requirement of completing four “broadening units” outside of their primary degree and students are able to satisfy these by electing to study a LOTE, however there is limited data available to assess whether this opportunity has affected undergraduate perceptions towards language study in any significant way. Thus, an anonymous online survey was sent to a sample of both male and female, domestic and international students enrolled in any of the five undergraduate degrees in the new courses of study and was completed by 225 students. An analysis of participants’ responses has exposed a number of key factors that influence undergraduate students’ choices to study a LOTE unit, including interest in the language and the possibility of using a LOTE in one’s future career, as well as a number of key themes, including the small value students placed on LOTE, despite being aware of the wide range of benefits. The survey responses have highlighted the urgent need for increased availability and quality of LOTE programs at a tertiary level, as well as for greater information and support available to students who are inexperienced or new to learning a LOTE.

Brad Wright

Charles Sturt University

Personal Development, Health and Physical Education Higher School Certificate Markers’ Perceptions of the New South Wales Higher School Certificate Online Website: A Quantitative Study

The New South Wales (NSW) Higher School Certificate (HSC) Online website is an online educational learning resource designed for teachers, students and parents of students who are involved in the HSC process. Previously to this research, there had been no formal evaluation of the website. As students’ HSC results have significant influence on their career options, tertiary course acceptance and other potential life choices, it is paramount that the resources which are used to prepare them for the HSC examinations are effective and of high quality.

In 2012, 96 Personal Development, Health and Physical Education (PDHPE) HSC markers completed a questionnaire designed to investigate their perceptions of the NSW HSC Online website. The questionnaire was distributed at the PDHPE HSC marking centre located at Homebush, NSW, and analysed via the quantitative paradigm by using frequency counts, chi squared and Pearson Product Moment correlational analysis.

Although participants generally perceived the website as a high quality learning resource, they identified various areas which required improvement, specifically the level of interactivity within website. Subsequently, by addressing the suggestions recommended as

a result of the findings of this research, the website can more effectively assist teachers to prepare students for their HSC examinations.

Chai Boon Tan, Wei Chern Soo, May Chee Lee

Macquarie University

Finding the best method of delivering the unit, Gambling, Sport and Medicine (STAT 175), from the perspective of the students in order to maximise student engagement

STAT 175, Gambling, Sport and Medicine, is a statistical planet unit offered in both semesters attracting around 300 students each year at Macquarie University. This unit introduces applied quantitative techniques via practical applications in the areas of gambling, sport and medical science. Currently, STAT 175 is delivered mainly through lectures and tutorials with complementary teaching and learning resources such as textbook, sample laboratory questions, consultation hours and Echo Recording (lecture recording available online). Despite the interesting and practical content of the unit, students' engagement has not been satisfactory throughout the years. One of the main reasons for this may be that it is neither a core unit for any major nor a prerequisite to any subsequent units. Hence, students tend to show lackadaisical attitude towards this unit. After rounds of discussions with the unit convener, we inferred that the current delivery method of this unit could be improved. Therefore, the purpose of this study is to investigate students' preference of delivery method so that resources could be channeled more effectively to maximize students' engagement. This year's STAT 175 students were surveyed in an effort to find the teaching delivery methods students find the most useful for their learning. For instance, students were asked whether they find online discussion forum useful if there is any. The preliminary data analysis shows that a majority of students find it useful. This suggests that introduction of online discussion forum can be beneficial. The outcome of this research will be used to outline a proposal to the unit convenor regarding the preferred delivery method from students' perspective. We hope this would improve the future delivery of this unit, which would in turn benefit future students of STAT 175. Despite the specific practicality of this research, we hope this research could serve as a reference for other similar units and/or further studies.

Charlotte King

The University of Western Australia

Why international students choose UWA for an exchange experience

As a result of global expansion, a growing number of students are choosing to study overseas. Education in Australia is well established and The University of Western Australia is the institution of choice for thousands of international exchange students every year, yet the factors leading to this choice are widely unknown. The focus for the current research in this area is limited to the negative outcomes and problems encountered whilst on exchange such as language difficulties and loneliness. In response, this investigation adopted a holistic qualitative approach aimed at generating a theory on what drives institutional choice for international students. The study draws on the perceptions of overseas exchange students through the use of interview and survey techniques. Five overseas exchange students took part in one-on-one interviews. Based on the findings, a survey was then developed and distributed to a larger group of overseas exchange students. Both the interviews and surveys were limited to those students completing a six month to one year exchange at the institution in which the study was conducted. While the results proved broad and varied, trends emerged that point to certain educational and social factors as key drivers of institutional choice for international students. As nations become more interested in student flow across borders (Altbach, 2004), so this research project will be of value to universities seeking to attract overseas exchange students. This study will contribute to a growing body of research based on international study experiences for use by education providers across the globe.

Claudia von Peltz

The University of Western Australia

International medical students, where to now?

Introduction: Recent media attention has drawn attention to difficulties in retaining locally trained international medical students after graduation, but few have queried the impact of this on the students. This study describes the perceptions and expectations of current international medical students. It explores international medical students intentions upon graduation, the factors that influence their decisions and therefore what can be done in order to improve locally trained graduate retention.

Methods: Between September and November 2012, a prospective mixed qualitative-quantitative online survey was sent to all currently enrolled international medical students at an Australian university.

Results: Of the 130 international medical students surveyed, complete responses were received from 77 (59%). Results showed a diverse student demographic with the majority (83%) wishing to remain in Australia upon graduation and 94% intending to apply for an Australian internship. Uncertainty over employment prospects and personal factors played a

major role in deciding where to practice as new graduates. Students further noted that they may not return to Australia in the future if they were to be excluded at this point in their career.

Conclusion: There is significant long-term value to be gained from the retention of locally trained international doctors. Current students express desires to remain in Australia upon graduation, and consider their options from an early stage, but display concern and doubt over the ability to remain in the face of external barriers. Retaining these graduates post-qualification will require optimising student engagement with university support structures, and for strategic workforce planning to match internship availability to projected graduate numbers.

Dac Khoa Nguyen

Macquarie University

Climate change and the increased risk in the insurance industry

There has been no solid economic argument for taking action to prevent or amend the effects of climate change due to the uncertainty in its timing and the level of its impact. However, the rise in economic cost in recent years due to unpredictable variability in weather appears to be a potential longer term threat of catastrophic losses. After another summer of flooding and extreme weather volatility, Australia has been re-rated on the international insurance markets (Insurance Council of Australia). Through the use of time series analysis, the research shows that growing levels of climate variability directly gives rise to the variability in the level of damage to insured assets which will then incur a negative economic cost justifying an increase in insurance premiums. Recent continuous occurrences of weather related catastrophes with consequent huge losses to the insurance industry have proven the direct link between volatile weather change and negative impacts on the insurance industry. Long term solutions instead of the short term method of raising premiums, should be taken as soon as possible, to prevent further loss caused by climate change.

Daniel Guilbert

Macquarie University

Understanding student engagement with research: A study of pre-service teachers' perceptions of research

Studies suggest that engagement in research activities can benefit undergraduate students in a number of ways. Research activities allow students to take ownership of their work and can lead to a deeper interest in, and understanding of, subject material. Research activities assist students in dissecting and interpreting the research reports of others, and have been shown to enhance or sustain undergraduate students' motivation for postgraduate study. Researchers have also noted links between undergraduate research engagement and improvements in student self-identity and self-efficacy.

Research activities, however, can represent a source of considerable anxiety for many undergraduate students. Common concerns include time limitations, inadequate support from academic staff, and uncertainty about gathering and analysing data. For academic staff looking to integrate research activities into their delivery of undergraduate programs, it is important that research activities are designed in such a way that they allow students to overcome their concerns and access the full benefits of research. This challenge demands that educators develop a stronger understanding of the factors affecting research engagement amongst undergraduate students.

This study aims to explore these factors as they affect pre-service teachers at Macquarie University. Using quantitative and qualitative data obtained through survey responses (N=235) and focus group interviews, this study investigates whether pre-service teachers at Macquarie University engage with research, and explores the factors that influence their level of engagement or disengagement with research. Results suggest that intrinsically-motivated students are more likely than extrinsically-motivated students to enjoy research. Also, pre-service teachers who possess research experience are more likely, compared to those lacking research experience, to view research as a valuable activity that the university should promote. The paper goes on to discuss the implications of these results for the effective organisation and promotion of research activities at the undergraduate level.

Dean Croxon

Macquarie University

Fair Go with Web 2.0: Effective strategies for the democratisation of teaching and learning processes using Web 2.0 technologies

This paper is a review of literature from 2009 to 2013 regarding the effective use of Web 2.0 technologies as democratising agents of learning and teaching processes in higher education. Web 2.0 technologies inherently facilitate and encourage core aspects of democratised learning, a concept addressing equal opportunity in the classroom. Such opportunities include: equal access to appropriate learning tools, the subversion of social and cultural barriers that hinder participation, and the blurring of lines that demarcate

traditional student-teacher roles. This review has (1) identified how Web 2.0 technologies have been implemented into university level instruction, and (2) analysed the utility and effectiveness of such implementations in democratising learning and teaching processes. Relevant literature was gathered via a systematic collection process from four educational databases: ERIC, Scopus, Web of Science, and Academic Search Premier. The review found that the use and effect of Web 2.0 technologies as democratising agents within higher education classrooms was rarely afforded any focus within pedagogical discourse and that where Web 2.0 technologies were being integrated into university curricula, such technologies were largely supplemental facets of traditional pedagogies. As a result, they were not being utilised to great effect as their implementation necessitates a pedagogical approach that seats Web 2.0 at its core. It has been found that Web 2.0 technologies serve as effective democratising agents when applied within an appropriate pedagogical model.

Douglas McDonald

University of Technology, Sydney

The Meaning of Life: Socio-Economic Rights and the Constitution of India

This paper examines the protection of social and economic rights under the Constitution of India (“the Constitution”). At its inception, only civil and political rights were considered to be enforceable under the Constitution; however, since the late 1970s, the Indian Supreme Court (“the Court”) has interpreted the Constitution as ensuring an enforceable ‘right to human dignity’. The amorphous notion of ‘dignity’ has been held to encompass rights to education, healthcare and subsistence, and to impose corresponding duties upon the state to ensure such rights.

This paper analyses the causes of this interpretive shift, including the changing nature of litigation before the Court, the Court’s attempts to reinforce popular perceptions of its legitimacy and the contributions of individual Justices. The relative contributions of each of these factors are evaluated. This paper argues that no individual cause of the Court’s turn towards activism can be viewed in isolation from the Court’s historical constitutional context or simultaneous political developments, with the corresponding decline in the legitimacy, reputation and capacities of other branches of the Indian state judged to be as responsible for the Court’s changing approach as developments within the Court itself.

This paper draws upon the author’s research as a recipient of the 2011 Prime Minister’s Australia Asia Award, including coursework and independent research completed at the National Law School of India University, Bangalore. This paper also draws upon the author’s practical experiences in Indian constitutional litigation while working at the Alternative Law Forum (a public interest law firm in Bangalore), including involvement in cases in the High

Court of Karnataka with regard to the constitutional 'right to life'. In addition, this paper draws upon scholarship by Indian and international academics, as well as decisions of the Supreme Court and High Courts of India.

Eesha Patel

University of Western Australia

Assisting International Students at University: A Teachers' Perspective

Students entering into a foreign learning environment need to adapt into a new educational and social environment. Previous research has indicated the need for teachers to be aware of this, and whilst some research has been conducted to gain an understanding of the perspectives that teachers in tertiary education have towards international students, there have been limited studies conducted within Australia, and none within the University of Western Australia (UWA). This study utilizes previous research conducted both within and outside of Australia and, through the use of preliminary face-to-face interviews and cross faculty surveys distributed throughout UWA, provides an insight into international experience of students from the teachers' perspective. The responses from the surveys can be categorized into four main general types of responses, as shown in a study conducted by Carroll (Carroll 2005). These attitudes range from denial; teachers who claim their job is to teach and it is the students' responsibility to learn, to teachers to teachers that acknowledge and appreciate student diversity and subsequently accommodate and adjust their practices to suit. A greater understanding of the dominant attitudes towards teaching international students provides a solid foundation for identifying how to university can better assist international students to adapt to university life in a foreign country. The research extracts the dominant attitudes, placing them within Carroll's framework, whilst also bringing light to the roles and responsibilities of the institution in assisting academic staff and international students work together to assimilate into a foreign university.

Fiona Ng

The University of Sydney

Weather and Health: A Rural Perspective

Background: Over the past decade Australia has experienced a number of extreme weather events including prolonged drought and extensive flooding. Although extreme weather events affect all communities, rural communities are at increased risk as they depend on the weather and the land for their livelihood. Extreme weather events have the potential to adversely affect an individual's mental and physical health status.

Between 1997 and 2009, the Central Western and Riverina regions of New South Wales (NSW) experienced prolonged drought. In early 2012, higher than average rainfall in the region caused extensive flooding, leading to the evacuation of some small towns. Although a flood event following extensive drought could be considered beneficial, rural communities struggle to manage the consequences of one extreme event after another – each of which have the potential to impact on mental and physical health.

Research Questions: The Weather and Health rural project investigated whether:

- 1) extreme weather events impact on the health and wellbeing of residents living in the Central West and Riverina regions of NSW and if so how? and
- 2) an individual's community role alters the way they experience and perceive extreme weather events.

Methodology: This qualitative study was conducted in four NSW regional towns that had experienced both prolonged drought and severe flooding in the last 10 years. In-depth semi-structured interviews and focus groups were used to collect information rich data on the experiences of residents, health service providers and council members in the four areas under study. Responses were transcribed verbatim, coded and analysed using thematic and content analysis.

Summary of Conclusions: Preliminary analysis of data revealed that participants from each town experienced the impact of extreme weather events differently. The experience of an extreme event led to an increase in self-reported psychological (notably anxiety and fear of the recurrence of an extreme event), and physical health issues.

Harriet Flavel

Macquarie University/Open Universities Australia

Compulsory homosexuality, compulsory heterosexuality and institutionalized extramarital sexual relations: coexistence of sociocultural institutions at Sparta

The lengthy period of Sparta's eminence in the ancient world is considered to be a direct result of her ethos and related sociocultural structure. This study then considers sociocultural institutions seemingly peculiar to Sparta. These institutions are: compulsory homosexuality, compulsory heterosexuality, and institutionalised extramarital sexual relations. This study will consider the coexistence of these social institutions, their individual and collective purposes, and their implications for Spartiate individuals of both sexes. The choice of terms in the study will be discussed. Parallels within the ancient world, in both Crete and Thebes, are considered. This is a study principally based on close reading and analysis of ancient literary texts, and secondarily of modern scholarship. The preliminary

conclusions of this research show that both the compulsory pederastic pedagogic homosexual relationship and the compulsory heterosexual marriage relationship existed for the purpose of the Spartan army. They functioned to strengthen the relations between generations in the existing army, and to breed Spartiates for the future, from Spartiate genes. The practice of institutionalised extramarital sexual relations is considered to be related to the latter. While the primary purpose of this study is not to make sweeping generalisations about the nature of sexuality, relationships and sociocultural institutions in all human beings over the ages, this study proposes that the presence of a 'higher purpose', committed to by all at Sparta, permitted a flexibility in what we might otherwise (and especially today) see as inflexible, inviolate identities and institutions. Previous studies have focused on individual institutions, and/or have been censorial or somewhat sensationalised in their approach. This study aims to look at these institutions in a new light by taking an even-handed look at the ways in which they fit together.

Jessica Smith, Elliot Nunn, Melissa Legendre and Nadia Sloan

University of Western Australia

Bioneers: An Insight into the Fluid Nature of Research

The discovery of knowledge has been pivotal to the development of our society. From the invention of the wheel to the development of modern pharmaceuticals, our world could not function without the constant inflow of novel ideas. Research is central to the unveiling of this knowledge. Universities understand that it is important for students to acquire this skill in order to ensure there is progress in the future. To encourage students to embark on their research journey early, the University of Western Australia (UWA) has developed its Bachelor of Philosophy (Honours) program: an undergraduate research degree.

Students conducting research for the first time may initially ask "what is research and how do I do it?" They may turn to publications that outline the research process in a set number of stages and give them guidelines on how to conduct research "properly." However, can we truly capture the nature of research in a set of steps? As second-year Bachelor of Philosophy (Honours) students, we hoped to shed light on this query by using a case study to analyse how theoretical research paradigms are implemented in practice. We investigated the research process carried out by SymbioticA, a research laboratory at UWA that enables artists to utilise biological techniques to create art that comments on the rapidly changing field of biological science. By comparing and contrasting SymbioticA's practices with a theoretical model of research, we revealed that research cannot be simplistically defined by a series of steps as there are multiple routes to answer research questions. We discovered that research has a fluid nature and researchers have considerable freedom when choosing their methods. Through our paper we hope to help fellow undergraduate students to grasp the concept of research and to excite them about the endless possibilities research brings.

Joel Evans

Macquarie University

Roman Mentoring in Modern Universities: Mentoring in the Roman Republic

Historically mentoring is a process of transferring knowledge from an experienced individual, to an inexperienced individual. It has been an integral aspect of educational agendas for thousands of years, as the value of peer mentoring is both enriching to the mentee's development, and the mentor's repute. This project aims to compare the mentoring practices of the Roman Republic to those of the contemporary world. The Roman Republic placed mentoring at the core of its educational systems. In an extremely competitive Roman world, the right mentor could guarantee not only political and social success, but also survival. Mentoring in the professions of oratory and politics has been chosen as examples from the Roman Republic, with the orator Cicero as a case study. Contemporary authors' opinions of what exactly constitutes mentoring, and the role of a mentor, are the foundations for the comparison of Republican practices to a selected modern case study: Macquarie University's "Telemachus Angels Ancient History Mentoring Program". Research papers and monographs have been utilised in conjunction with ancient evidence, particularly the writings of Cicero himself, and also the "Telemachus Angels" mission statement and mentoring projects. The juxtaposition of Roman and contemporary mentoring indicates that the similarities outweigh the differences in number. However the differences are not insignificant, for they highlight class, cultural and gender prejudices that were held as the norm in the Republic, mirrored in the West until the twentieth century. Whilst the attitudes toward and the focus of mentoring may have changed after the civil rights movements of recent memory, there is much to be learned from the practice of Republican mentoring. From Republican practices recommendations can be made to improve mentoring programs in modern universities.

Joseph Bunton

University of Queensland

A Branch and Price Scheme for the Single Track Railway Line Problem

The transportation of natural resources and around the world relies heavily upon extensive railway networks. Large sections of these networks can be single track, with these single track sections often causing bottlenecks in the network. Due to the age and remoteness of sections of such networks, upgrading the current infrastructure can be quite expensive or impossible. These factors make effective timetabling of such sections important. The Single Track Railway Line Problem involves the scheduling of such single track sections with several other operational constraint considered. We consider the problem of generating an optimal daily timetable on a single train network, maximising the number of trains through the network. Solution methods for this problem can be slow and scale poorly in problem size. To

combat this, we propose the use of a Branch & Price scheme for this problem. For larger problem sizes we also look at a heuristic Fix & Price method. Numerical experiments compare the performance of these methods with alternate solution methods including heuristic methods and a Job Shop model. Preliminary results suggest that while a full Branch and Price scheme might be unrealistic for real world size problems, a heuristic Fix and Price scheme may offer a balance between solution time and quality, comparable to other methods.

Liam McCann

Macquarie University

The Psychological Aspects of Historical and Autobiographical Memory: A Response To Norman Brown's "Living In History" Project

Cognitive scientist Norman Brown's new work "Living in History; How War, Terrorism and Natural Disaster Affect the Organisation of Autobiographical Memory" is intriguing in its attempts to explain the historical significance of events through experiments on memory recall. Brown posits that personal memory is divided by historically-defined autobiographical events (H-DAPs), which occur when a social or political event causes a distinct shift in an individual or community's daily life. Brown therefore argues that the historical significance of an event can be determined through analysing the cognitive effect of this event on a population, which can be shown through the event appearing in memory recall experiments. This is of significant importance both to academic disciplines of history, psychology, politics and philosophy, but also to policy making and attempting to account for shifting norms and attitudes in political and social spheres.

This response to Brown's paper will examine his experiment, and evaluate the methodological worth of attempting to cognitively and psychologically evaluate the effects of historical events. Furthermore, it will also demonstrate the positive and negative aspects of attempting to utilise psychological data as supporting evidence for historical arguments. This will then lead to an evaluation of the conflict between historical and psychological analyses of important political and social events, and bridge the methodological rift between the two disparate disciplines. Finally, the paper will conclude with the further implications of this theory's effect on the historical, political and psychological spheres, and will posit instances where it can be utilised for therapeutic or beneficial purposes, in conflict affected areas such as Northern Ireland, the Middle East or Eastern Europe, demonstrating that utilising historical and psychological analyses together proves to be far stronger in practical terms as opposed to utilising a singular approach.

Matthew Keelty

University of Otago

Investment in Internationalisation Resources at the Tertiary Level

Universities are continually pushing to be more internationalised as it benefits them in a number of ways; social, political, academic and economic. They must undertake the process of internationalisation within the constraint of a limited budget, and therefore need to allocate funding efficiently with the goal of maximising the benefit towards internationalisation. My research compares the allocation of resources promoting internationalisation of the curriculum, and staff and student exchanges in two universities within the Matariki Network (a network of seven universities across the globe). A qualitative research approach is used with the methods of data collection including interviews and content analysis of policy documents. First, data regarding broad budgets and university statistics was gathered from publicly available information. Secondly, two interviews were conducted with head figures of the University's International Committee or equivalent, to explore their opinions on their staff and student exchange programs, internationalisation of the curriculum at their institution, and to gain insight into how exchanges and internationalisation initiatives are resourced. These interviews expanded on the publicly available data. Data were analysed using a general inductive approach. In my presentation I will present findings from my research as well as identifying implications for universities keen to effectively resource internationalisation initiatives.

Michael Gibbs

Macquarie University

Towards a new green energy: Production of chlorophyll in E. coli

As an entry into the iGem (International Genetically Engineered Machine) synthetic biology competition, students from Macquarie University's Biomolecular Sciences capstone unit are attempting to produce chlorophyll in *Escherichia coli*.

Our experiment attempts to express eight genes (sourced from *Chlamydomonas reinhardtii*) of the chlorophyll biosynthesis pathway via bacterial host. Gene sequences have been adjusted for prokaryotic expression as well as to fit in with iGem synthetic biology 'biobrick' standards. The Biobrick standards are DNA sequences which have a defined framework, allowing for quick and simple rearrangement of genes present in a host. We are constructing Biobricks from synthetically produced DNA fragments and fragments amplified via PCR, using a relatively new technique called Gibson assembly.

Chlorophyll plays a major role in energy production in plants: a pigment for the absorption of light. Successful production of chlorophyll in a bacterial host is the first step towards the synthetic construction of photosystem II, which uses light to create cellular energy by charging electrons provided by the breakdown of water molecules. In natural systems this energy is then used for the production of ATP (energy for living organisms).

Production of this system in a lab environment potentially allows for green energy production, by passing charged electrons energy on to alternate electron acceptors, for example to charge a battery. Production of this system in a lab situation also allows for further and deeper study of photosynthetic processes.

So far two of the eight required genes have been successfully assembled into biobrick form and grown in bacterial hosts. Various colour changes in bacterial colonies will indicate successful steps within the production of chlorophyll, and simple assays can test for two of the sub-products.

This experiment is due to be completed by September.

Naomi Millar-Powell

Macquarie University

Religion, hope, and well-being: The role of hope in the association between religion and well-being among older Australians

A global trend in population ageing is expected to lead to changes in the age composition worldwide. In response to the challenges presented by the ageing population, there has been an increased emphasis in government policy on recognising the importance of encouraging active ageing and increasing well-being among older Australians (Department of Health and Ageing, 2011). A growing body of research points to positive well-being outcomes associated with religion. The present study investigated the roles of trait hope and affective hope in the association between religion and well-being. Trait hope represents a cognitive model, whereby hope is understood to involve the planned behaviours, and motivation required for goal pursuit (Snyder, 2002). In contrast, affective hope is considered a future directed emotion that incorporates an expectation of individual goal attainment, and altruistic hope for others (Averill, Catlin & Chon, 1990). In the current study religion was measured in terms of non-organisational religious behaviour (prayer, meditation, and reading sacred texts) and intrinsic religion (internal motivation and experience). A sample of

246 older Australians (65 years and older) completed self-report measures of religiosity, trait hope, affective hope, and meaning in life. Affective hope was found to mediate the effects of non-organisational religion and intrinsic religion on meaning in life. As expected, trait hope positively predicted meaning in life; however, there was no evidence that it mediated the effects of religion on meaning in life. These results confirm the important role of trait hope as a precursor to meaning in life, and they suggest that, for older individuals, affective hope is one of the psychological mechanisms whereby religiosity contributes to their sense of life meaning.

Nathan McMahon

Univeristy of Queensland

An Optomechanical Probe model of Gravitational Decoherence

Physics has the ability to describe the fundamental workings of the world from the very small in the weird world of quantum mechanics and particle physics upto the very large scales where Einstien's theory of general relativity explains the motion of objects near planets and stars. However the two theories which describe these extremes are fundamentally different and cannot be reconciled in their current state. There have been some proposals by people such as Penrose and Diosi which state that an objects gravitational field has the ability to remove quantum effects from large objects in the form of adding noise to the object. This could explain why physics transition from quantum mechanics to general relativity and lead to an explanation of why quantum mechanics isn't seen in everyday life.

This research aims to see if it is possible to perform an experiment which could detect whether or not this added noise exists. This noise (which is expected to appear in terms of a heating effect) is expected to be quite small, however it may be possible to detect using highly precise optomechanical devices, capable of detecting changes in position to femtometer scales. The model being investigated also is capable of performing a measurement of the gravitational constant G , in the hope that it can improve upon currently known values. An exact solution was found for the model which including the effects of noise due to the environment and from this the required parameters can be determined. This would determine whether any current devices are capable of such measurements or if this model is infeasible.

Patrick Vu

The University of Western Australia

Online education and its potential impact on international student inflow to Australian universities

The rise of high-quality online education has been described as a paradigm shift in higher education and this study examines the relationship between the new disruptive technology and international student mobility to Australian universities. The growing access and availability of online education presents a low-cost alternative for prospective foreign students and consequently, it may reduce the incentive for them to travel abroad to seek an on-campus Australian education. Individual interviews were conducted with staff and international students at one Australian university to explore the motivations behind foreign students' choice to study in Australia and how these might be affected by the rise of online courses. On completing the interviews, an online questionnaire was distributed and completed by 507 international students. By elucidating international students' motivations for studying in Australia, this study provides a number of recommendations to Australian universities that seek to maintain high levels of international student enrolments. It is recommended that they emphasise the benefits of on-campus education, continue to promote university rankings, and integrate online learning and other technology-related pedagogical developments to enhance their current course offerings. These recommendations are intended assist Australian universities to meet future challenges in this arena and to help inform their strategies as they move rapidly into the Digital age.

Rayan Calimlim

University of Technology, Sydney

Electioneering in the Age of 'New Media'

In 2004, Howard Dean ran for the Democratic nomination for the presidency in the United States. Though ultimately unsuccessful, his campaign radically "changed American politics forever" (Macnamara 2010, p. 161) and was a "critical turning point for political communication" worldwide (Xenos and Hoy, cited in Manamara 2010, pp. 160-161). This was because of his campaign's extensive use of the internet and Web 2.0 media in garnering support and funds for his candidature. Dean's presidential campaign changed the way in which political electioneering would occur from thereon in, and the methods he utilized would become commonplace in elections in the developed world from thereon in. Building on the work of media analysts such as Jenkins and Macnamara, this work will analyse the impact that interactive social media has had upon political electioneering and communication since its first use in 2004, including its most successful uses in the political arena. In doing so, it will explore the means by which political electioneering was undertaken in a number of developed Anglophonic nations prior to the age of social media,

and compare it with methods of political communication that have emerged since then. A discussion of the media convergence that has occurred between the so-called 'old' and 'new' media will also be undertaken. Finally, the most effective means of using 'old' media and 'new' media in election communication will be analyzed in this essay. It will conclude that, despite advancements in technology and the benefits of social media and Web 2.0 in garnering support from decided voters, 'old' media systems such as grassroots activism and mass media communication are more effective in gaining the votes of independent, undecided voters who, by and large, hold the sway of power in any given election.

Rodney Cross

Macquarie University

Bold as Brass: 'Brass Instruments in the Roman Army'

'Brass instruments', more specifically 'ancient lip-vibrated aerophones', played an important role in the Roman army; their use enabled greater communication and organisation on the battlefield. These instruments served a range of tactical and strategic purposes, which provided an advantage to the ancient Roman army. The tubiliustrum festival, which was closely associated with Mars, the Roman god of War, clearly displayed the military and spiritual significance of these instruments through the symbolic purification of 'tubae sacrorem' (sacred trumpets), and as such will be presented as a brief case study. Despite the considerable amount of primary literary evidence, discrepancies within definitions and terminology in the ancient source material, especially in the form of military treatises and incidental poetic references, provide boundaries to thorough analyses of the use of military musical instruments in Roman warfare. These boundaries in the primary material have, in turn, significantly limited the amount of contemporary anglophone scholarship on this topic. By placing emphasis on the critical examination of primary sources, including surviving archaeological evidence and visual evidence from public monuments and funerary reliefs, this paper will both: suggest clarifications of the application of these terms within an ancient context, and attempt to provide a thorough evaluation of the importance, change and continuation, of the use of 'brass instruments' in the Roman army.

Saartje Tack

Macquarie University

Flouting the Law: Underbelly: Razor's (De)Construction of Normative Femininity

Australian TV series *Underbelly: Razor* represents gangsters Kate Leigh and Tilly Devine as women equipped to compete on an equal footing with their male counterparts. These women's 'toughness' is simultaneously tempered and reinforced by gestures toward stereotypes of 'female weakness', which they employ to fulfil their criminal agendas. This paper will analyse how the TV series frames these women's femininity through interactions between the male and female characters and how the series invites a modern-day audience to interpret these representations of femininity. By foregrounding idea(l)s associated with normative femininity, the paper will explore themes of vulnerability and sexuality as creative approaches to criminal strategy. It will evaluate the relative success of such gendered acts via theories of performativity, masquerade, mimicry and camp so as to analyse how each of these influence the acceptance of *Underbelly's* construction of and the characters' (ab)use of 'femininity'. As such, this paper suggests that *Underbelly: Razor*, in representing Kate Leigh and Tilly Devine's gendered acts as shifting between performativity and performance, does not simply reinscribe notions of normative femininity on the bodies of these women, but also questions and queers them.

Saba Vayani-Lai

Macquarie University

Big History: Opening the Gateway to Interdisciplinary Learning

Big History is an area of history which brings the natural sciences and the humanities together to explore history on the grandest of scales, from the origins of the universe to modern human events. This is a bold view of history because the humanities and sciences have traditionally been treated as separate disciplines in academic settings. The aim of this research has been to explore how the interdisciplinary nature of Big History is received by students. The methodology of this research has involved surveying past students of MHIS115, Macquarie University's flagship Big History unit. The purpose of the survey is to determine extent to which students (prior to studying Big History) hold preconceived ideas of the natural sciences and the humanities existing as separate and unrelated disciplines. Secondly, the survey asks students to evaluate how Big History, in offering a •macro perspective•, could challenge these preconceptions and act as a gateway to further interdisciplinary learning. This research has been supplemented by an analysis of the background literature related to interdisciplinary learning and in particular how Big History could serve as a form of science education for humanities students.

The preliminary conclusions indicate that preconceptions of the divide between the natural sciences and the humanities exist among many students, primarily as a result of previous educational experiences. Furthermore, students have identified the narrative structure of

Big History as key to its success as an interdisciplinary unit of study because it draws together aspects of both disciplines in an effortless way. For example, students of a non-science background found this aspect of the unit to help them contextualise complex ideas as part of a grander narrative.

Samantha Bentink

Macquarie University

Linking-/ɹ/ in Australian English: How "r"-like is it?

In Australian English (AusE), "r" is only pronounced preceding vowel sounds, never before consonants or pauses. However, while the AusE production of the word "master" rhymes with "pasta" with no final /ɹ/ sound, in connected speech the /ɹ/ may be pronounced when the following word begins with a vowel (as in "Mister Abbot"). This liaison phenomenon in speech is known as "linking-/ɹ/".

The aim of this study was to examine acoustic features of AusE /ɹ/ in a range of contexts to ascertain how comparable linking-/ɹ/ is to /ɹ/ in word initial (WI) and word medial (WM) positions. This will lead to a better understanding of liaison phenomena, and will provide a platform for further analysis of connected speech processes in English, helping to inform development of synthetic speech and voice recognition software, as well as increasing our knowledge of the phonetic intricacies of AusE.

Linking-/ɹ/ is expected to be acoustically similar to ambisyllabic /ɹ/ that occurs between vowels in WM position. Both WM and linking-/ɹ/ are predicted to have weaker gestural strength and earlier gestural timing than WI /ɹ/ (Gick, 1999; Giegerich, 2007).

Data from six sentences produced by 29 AusE speakers was obtained from the ANDOSL Corpus (Millar et al., 1994). Each sentence contained the VCV (vowel-consonant-vowel) sequence /əɹe/ in WI, WM or linking-/ɹ/ position. VCV sequences were acoustically examined using Praat (Boersma & Weenink, 2010). "r-ness" was estimated through measurement of /ɹ/ constriction magnitude (third formant (F3) frequency), /VCV/ span duration, and timing of maximum constriction within the /VCV/ span.

Results show unexpected patterns of mixed significance in F3, /VCV/ duration and timing of maximal constriction between all three conditions. This suggests that the realisation of linking-/ɹ/ in AusE may be more coda-like than ambisyllabic, and that further examination is warranted.

Sophia Kaiko

University of Western Australia

Improving Australian university participation rates for study abroad in Asia

Study abroad is broadly perceived as a positive and rewarding experience. It is associated with great personal and academic growth, regardless of the specific destination. However, there is a deep discrepancy in the popularity of various exchange locations. Participation rates for Study Abroad in Asia remain significantly lower than student exchanges to other countries. This is surprising given the recent emphasis on the Asian Century and the funding that goes into such programs. In order to attract the highest calibre of students to study abroad in this region, it is important to identify the key barriers that exist for undergraduate students. Research in this area is limited. This study draws upon data regarding applicant preferences from the Study Abroad office at the University of Western Australia (UWA). Further, interviews were conducted with fifteen undergraduate domestic students at UWA which questioned their key motivations and barriers for studying abroad in Asia. These interviewees were made up of current study abroad applicants, past students of the study abroad program, and students who had no connection with the study abroad program. The results show that the reputation of a university as being too studious was one of the key barriers to choosing it as a destination for studying abroad. Insufficient information about the programs in Asia and language barriers were also significant disincentives. These findings can be used to develop study abroad programs that better attract students, and to create more effective marketing of the programs that already exist. Implications for the Study Abroad office, senior administrators and Higher Education researchers are touched upon. This study also addresses limitations and future research possibilities.

Stephanie Baddock, Madhvi Laxman

University of Otago

Why International Students Choose to Study at the University of Otago, New Zealand

International students support the growing economy of New Zealand (NZ) and contribute to internationalisation within our tertiary institutions. Otago University's current quota of international students is considered to be low: the University has been pressured to increase its cap on international students and to do more to attract them (Elder, 2013), including a re-evaluation of existing marketing strategies. In order to recruit more international students, Otago University needs to understand what features of the University are attractive to this group of students. The aim of our research is to identify the

reasons why international students choose Otago University as a place for tertiary study. Participants were full-time international students currently in their first year of study at Otago University. Initial one-on-one interviews were undertaken with three international students from different home countries to provide us with background information on their reasons for coming to Otago University. Survey questions were then formulated from this information and a link to an online survey was emailed to 338 international students. 27% of the students responded and they came from disciplines ranging from Commerce, Health Sciences, Humanities and Sciences. In our presentation we will present findings on the main reasons identified by participants (e.g., “quality of education” was the most-frequently selected reason) as well as variations according to gender, home country, discipline, and level of study (e.g., postgraduate and undergraduate students were significantly different in terms of “preferred supervisor/lecturer working at the University of Otago”). We hope that our findings can be used to inform policy and practice generating novel and targeted marketing strategies.

Tiho Mijatov

University of Otago

Why and How to Internationalise Tort Law Curriculum Content

Law schools can no longer ignore the fact that the world is getting smaller. One way they could choose to respond to this ‘globalization’ is by reforming the content of their most important courses to ensure these courses feature more international material. This pilot research has thus first asked whether this response – “internationalisation”, to be precise – is valuable and in what ways it might be so. Next it explored what specific actions could be taken to internationalise curriculum content, if that turned out to be a valuable shift. Third, the research identified and then evaluated the level of internationalisation at two universities: Otago University in Dunedin New Zealand (Otago) and University of Western Australia (UWA).

This research has honed in on just one core law course – the law of torts (non-criminal wrongs like negligence and defamation). The research questions have been answered qualitatively by way of a four-part method. First, an extensive literature review was conducted in order to assemble existing answers into a coherent theoretic whole. Secondly a sample of course documents from Otago and UWA were analyzed for international content. Thirdly student perceptions of internationalisation were gained by a survey of 91 students undertaking tort courses at Otago and UWA. Fourthly interviews with course-coordinators at Otago and UWA were conducted to gain the educator’s perspective on internationalisation.

The research found that internationalising tort law curriculum content (and higher education courses generally) is extremely valuable in ways ranging from economically and politically to personally and academically. It also found that various simple methods of reform exist by which the benefits of internationalisation may be enjoyed. Thus, a strong case is made out for progressing the internationalisation conversation from “if” and “how” to “when” and we see the right answer is “as soon as possible.”

Timmi Li

Macquarie University

Why people do (not) study languages?

The benefits of learning a new language are without doubt beneficial for the individual either for personal or professional gain. The opportunity and interest to learn a language fosters open-mindedness, which has the ability to overcome cultural, geographical and linguistic barriers and promotes awareness, understanding and experiences. The aim of this study is to investigate the different opinions and attitudes towards learning a new language; the reasons and motivations behind individual’s choice of studying or not studying languages.

Previous studies suggest that learners of a second language may face challenges and require self-initiated activities that go beyond the conventional classroom. Foreign language learners are vulnerable to demotivation and have limited opportunities to practice their chosen language. Moreover, the influence of various cultural/linguistic backgrounds has been proven to affect individual’s language learning performance. Thus, our study seeks to find out why more people do not study languages in Australia.

At the ACUR, we report preliminary results of our online survey, in which questions such as “Do you use more than one language in your daily life?” and “What do you associate mono/multilingualism with?” will be addressed. Individuals from diverse academic, social and linguistic backgrounds will be included regardless of whether they are currently studying language(s) or have an interest in studying another language. The results obtained will form the very foundation of our future focus group interviews to gain further insight into people’s attitudes towards language learning.

We believe that the information collected will be useful to gain a better understanding for the process of second language learning, allocation of resources and curriculum development. We are confident that the findings have potential to professionalize language learning by promoting its valuable attributes and increasing significance to one’s career path in today’s increasingly globalized world.

William Cranwell, Richard P Gerraty, Catherine Armany, Monica Hatch, Bernard Infeld, Sean McGuigan

Epworth HealthCare, Monash University

TIA diagnosis in an emergency department: persistent symptoms and final diagnosis

Background and Purpose: Transient ischaemic attack (TIA), with completely resolving symptoms and no ongoing neurological deficits, and minor stroke represent a substantial proportion of patients presenting to the emergency department (ED) with acute neurological complaints. An increased attention to TIA in the last 10 years has improved our knowledge of the nature of TIAs, the risk of recurrent stroke and the clinical and imaging factors which contribute to that risk. Due to its heterogeneous nature, TIA has been a difficult diagnosis to make, often including minor stroke patients with rapidly resolving symptoms. We aimed to investigate the importance of ongoing signs and symptoms in the ED of Epworth Hospital Richmond, with the capacity to admit a large percentage of TIA patients under the care of neurologists and state-of-the art imaging as part of the routine clinical work-up.

Research Questions: What is the significance of ongoing neurological deficits in the ED and their implication for the final diagnosis? How many patients given the diagnosis of “transient ischaemic attack” in the ED have already suffered an ischaemic stroke?

Methods – A retrospective study was performed on consecutive patients diagnosed with TIA in the ED at Epworth Hospital between July 2009 and June 2011. Patient details were retrieved from an ED database listing all patients with an ED discharge diagnosis of TIA. The notes were reviewed to determine the nature of the presenting complaint, its duration, and whether there were persisting neurological signs and symptoms at the time of first assessment in the ED. Investigation of patients with magnetic resonance imaging (MRI) was also recorded.

Results: We collected data for 175 patients given a diagnosis of TIA in the ED. Exclusions left 105 patients for analysis. The mean age was 70 ± 12 years. Fifty-eight patients were male. Twenty-seven patients (26%) received a diagnosis of stroke as an inpatient. Twelve of these patients were found to have ongoing signs and symptoms in the ED at first assessment, but the implication for the diagnosis of stroke was not realised, 12 were reported to have no neurological deficits in the ED, with subsequent neurologist assessment and investigation confirming the diagnosis of stroke, and 3 patients were acknowledged to have a deficit in the ED, and the implication for the diagnosis of stroke was realised. An additional 2 patients

were reported to demonstrate signs and symptoms in the ED and found to suffer demyelinating disease and subarachnoid haemorrhage.

Conclusions: The results of this study confirm that a proportion of patients given a diagnosis of TIA in the ED demonstrate ongoing signs and symptoms, which in all cases has an impact on the final diagnosis. Furthermore, a number of patients diagnosed with TIA in the ED have clinical or imaging features, indicating that the actual diagnosis is acute stroke. The majority of these patients demonstrate evidence of permanent brain damage on neuroimaging. Closer attention to ongoing symptoms in the ED may allow for more timely investigation and commencement of treatment in those appropriate.

Xi Wen Chan

Australian National University

Validation of the Work/Life Balance Self-Efficacy (WLBSE) Scale

Self-efficacy has become a significant topic of investigation within the work-family literature, and researchers have indicated that domain-specific measures of self-efficacy have better explanatory and predictive power than generalised measures of self-efficacy. Despite acknowledging the importance of domain specificity with regards to self-efficacy, management scholars continue to treat self-efficacy as a generalised construct. In light of this gap in the literature, and with self-efficacy increasingly applied to the work-family interface, the current research seeks to validate empirically a newly developed work/life balance self-efficacy (WLBSE) scale using structural equation modelling (SEM). Based on data (N = 997) obtained from employees in four different organisations within Australia, confirmatory factor analyses were performed and results showed that the uni-dimensional, five-item measure of WLBSE had strong internal consistency ($\alpha = .95$). Additionally, subsequent tests of the structural model involving six latent constructs – namely, time-based, strain-based, and behaviour-based work-to-family conflict, WLBSE, job satisfaction, and psychological strain (anxiety/depression) – showed that WLBSE was negatively associated with the work-to-family conflict constructs and psychological strain (anxiety/depression), and positively associated with job satisfaction. That is to say, the WLBSE scale showed positive and negative associations with the antecedent and criterion variables in the expected directions. Therefore, the current research confirms that the proposed measure of WLBSE is robust and predicts relevant criterion variables. Theoretical and practical implications of the results are further discussed.