The threat you can't afford to ignore

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Welcome

Our smartphones are powerful computers that are constantly capturing information about our social habits, friends, location, work and private lives. In this context, how many of us have taken steps to protect our smartphones, and therefore ourselves, from potential cyber-attack? In this second edition of Edith, the official magazine of ECU, we look at the growing threat of cybercrime and how our researchers in the ECU Security Research Institute are responding to this to protect individuals and businesses.

We also look at some very successful partnerships within the University and with our communities. Universities don’t exist in isolation and in order to achieve some academic goals it is vital that we work closely with individuals and groups. From recovering after cancer treatment to helping deliver babies, these partnerships are providing real benefits to both ECU and the community.

Professor Arshad Omari
Acting Vice-Chancellor

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One in four Australians is the target of cyber crime each year, yet many individuals and businesses are blithely unaware of the risks posed to data, identity and savings. Ruth Callaghan looks at the security threats facing Australia today – and tomorrow.
Siesta time

Two sleeping pods have been installed in the Joondalup Campus Library to encourage students to take a short break when needed. The EnergyPods feature a reclining bed with a visor to reduce outside light and noise while also providing privacy. The National Sleep Foundation recommends a short ‘power nap’ of between 20 and 30 minutes to improve concentration, mood, alertness and performance. The pods use sound, light and gentle vibrations to wake the occupant after a 20-minute period.

New professor for South West

ECU has recently appointed a new professor of social work and disability studies, to be based at the South West Campus in Bunbury. Professor Kathy Boxall was previously a senior lecturer in social work at the University of Sheffield in the UK. Before moving into higher education, Professor Boxall worked as a social worker with people with intellectual disabilities and their families. She has research interests in the areas of intellectual disability and mental health.

Heart rate monitor

A new heart rate monitor that operates under the same principals as noise-cancelling headphones has been developed by the Electron Science Research Institute. While traditional monitors work by measuring the electrical impulses through a series of electrodes placed on the patient’s body, the new monitor works by isolating the magnetic field generated by the human heart. Dr Valentina Tiporlini says the monitor has the advantage of not needing to be in contact with the patient’s skin to work, meaning it could be suitable for burns patients and the very young.

Under one roof

The $22m ECU Health Centre, located in Wanneroo in Perth’s northern suburbs, opened on time and on budget in September. It includes a GP Super Clinic as well as pharmacy, pathology collection, physiotherapy, occupational therapy, speech pathology and dietetics services. For ECU students and researchers it will offer new opportunities to gain clinical experience and work alongside health professionals.

Cameras first in WA

The WA Screen Academy has secured two new state-of-the-art ARRI Alexa motion picture cameras. These sophisticated cameras are highly sought after by filmmakers and ECU is believed to be the only teaching institution in WA to use them. The Academy has already commenced workshops to teach emerging and mid-career filmmakers how to operate the digital cameras.

Fire warning

School of Communications and Arts researchers have created a service to provide free bushfire information to the public. The MyFireWatch website, created by PhD candidate Paul Haimes, is part of a collaborative ARC linkage project between Landgate and ECU. The website provides access to satellite information that maps the locations of fires and lightning activity. Anyone with an internet connection can now easily access information that was previously available only to experts with technical knowledge. It was designed for everyday use by ordinary people, particularly those in fire-prone regional Australia.
New VC

ECU has appointed Professor Steve Chapman as the next Vice-Chancellor. Professor Chapman is currently the Principal and Vice-Chancellor of Heriot-Watt University in Scotland, a position he has held since 2009. He is due to commence with ECU in April 2015. Professor Kerry Cox retired as ECU Vice-Chancellor in September after more than eight and a half years in the position. Professor Arshad Omari has been appointed Acting Vice-Chancellor for the interim period.

Five stars for ECU

ECU received five-star ratings for its teaching quality, generic skills and overall satisfaction for the sixth consecutive year. The Good Universities Guide 2015 also showed ECU graduates have enjoyed a steady improvement in graduate starting salaries, achieving five stars in this year’s edition. The Good Universities Guide uses the results of a major annual survey of all Australian graduating students on their university experience and current employment.

Borneo tour

Tourism students are helping Borneo’s native pygmy elephants and orang-utans, thanks to a tree planting program along the Kinabatangan River. Each year ECU students visit Malaysian Borneo as part of an eco-tourism study tour. In 2006 they joined with Borneo Ecotourism Solutions & Technologies (BEST) to establish a wildlife corridor to counter the effects of land clearing for palm oil plantations. Trees planted by the original study group are now more than 15 metres tall.

Student programs go to air

Graduate Diploma of Broadcasting students are celebrating the 10th anniversary of producing the Rough Cut magazine-style program for Channel 7 Perth and GWN7. Undergraduate Broadcasting students are also busy filming stories for Project WA, which will also screen on Channel 7 and GWN7 and reflects life across Western Australia. Rough Cut and Project WA are filmed, written, edited and presented by the students and will screen in December this year.
The Big Question

How can we make better use of the Swan River?

Medium and high-density development

I’d like to see more of the brownfield sites being developed along the Swan River, particularly the derelict East Perth power station and Sunset Hospital site in Dalkeith. What they’ve done with the Tate Modern in London is the perfect example of revitalising an under-utilised heritage building into a mixed-use, arts-based precinct.

Beyond that, there’s scope for more medium and high-density development in brownfield sites and existing suburbs along the Swan River, such as Fremantle, Canning Bridge and Victoria Park. We should aim for best-practice, low-energy sustainable developments that have a high proportion of residents who work in and around the area so they don’t need to add to Perth’s traffic congestion.

Tim Perkins
Senior Lecturer in Planning, School of Law and Justice

Heritage trail

I’d like to see more attractions that encourage tourists to the river. At the moment you can visit parts of the river, or take a cruise along it, but having a heritage trail along the river bank would encourage people to stroll from point to point and enjoy different areas. They’ve done this very well in cities like Kuching in Malaysia and Brisbane with South Bank.

The other opportunity is to promote more interaction between tourists and the Indigenous custodians of the river, the Nyoongar people, through guided tours. Activities that help tourists interpret and engage with the culture and history of the river would be very popular.

Ross Dowling
Foundation Professor of Tourism School of Business

Restore wetlands

I’d like to see the fringing wetlands and large stands of rushes that were once abundant along the edge of the Swan River restored. They would enhance the river’s ability to remove and control the range of pollutants that wash in from the catchment. The restored areas would also provide shelter for juvenile fish and other aquatic life, enhancing biodiversity within the river.

Wetland edges are often better at coping with storm events than the walls in place in many locations. The cost of maintaining and replacing these walls is considerable and could be offset by the restoration.

Associate Professor Mark Lund
Mine Water and Environment Research Centre
The beautiful grounds at Edith Cowan University’s three campuses are looked after by a team of 11 grounds staff. David Gear sat down with long-serving gardener Steve Harrison to get the lowdown on all things green.

Q1 How did you come to work at ECU?
I actually started working at ECU in the bookshop at the old Churchlands campus in the mid-1990s. I was studying horticulture at night school at the time and I mentioned that I would be interested in working in the grounds if a position came up. Not long after a position became available at Churchlands and I jumped at it. I moved to the Joondalup campus a few years later, and I like to say I haven’t looked back since.

Q2 What changes have you witnessed to the campus since you started here?
There have been huge changes to the Joondalup campus in my time here. Before the campus was built in Joondalup the area was a pine plantation. Over time as the campus has grown and more buildings have gone up, some of the pines have had to be removed. We then plant gardens of native plants with low watering requirements around the buildings, so in a way we are bringing the bush back.

Q3 How does the work change with the changing of the seasons?
There are particular seasonal jobs that we tackle at certain times of the year. Winter is our main planting time. The rains and cooler weather give us a good opportunity to get plants in and have them established by the time the hot weather comes around.

In spring we start to check that all our reticulation is in order. We check to make sure the pumps are still working and clean any blockages out of the pipes. Summer is all about watering and keeping all the plants alive. In autumn we do a lot of planning and buying of plants that we will plant over winter.

Q4 What are some things about the grounds that people might not know?
The campus, which covers 36.5ha, has almost 3km of main irrigation water pipe running under it. There is about 21km of lateral piping that runs from these main lines. The pumps that run the irrigation system are connected to the campus lake, so water is drawn from the lake and then pumped around the campus to water the gardens. The lake itself is topped up from groundwater.

Q5 What is your favourite part of the job?
Getting to work outside every day is fantastic, when the weather is good. Because I’m always out and about on campus, I get to have lots of interaction with staff and students. I love being able to share my knowledge of plants and gardening with anyone who asks. Planning a new garden and choosing the types of plants we will use is always interesting; there’s a certain amount of artistry to it. All the grounds staff have different ideas and favourite plants, so between the lot of us I think we come up with some great designs.

“Planning a new garden and choosing the types of plants we will use is always interesting; there’s a certain amount of artistry to it.”
Students transform lives through legal work

For the past eight years, ECU has partnered with the Joondalup Community Legal Centre to help disadvantaged and low-income residents in Perth’s northern suburbs with legal advice and representation.

The collaborative project is funded through Federal and State Government departments, including the State Attorney General’s office, Legal Aid WA and the Department for Communities.

Each semester, up to 10 students from ECU’s School of Law and Justice work alongside the Centre’s lawyers to help local residents with legal matters and representation on issues of family, civil, tenancy and criminal law.

The partnership is a relatively unusual one, with only a handful of universities working with Community Legal Centres around Australia.

The Centre does important work within the community and it would struggle to provide all the services it does without the students’ help. At the same time, the Centre provides students with valuable hands-on experience working face-to-face with clients.

The Centre’s managing solicitor, Callum Hair, said it provides general legal advice by phone to people who call in with minor legal problems.

“We have a lawyer who attends Joondalup Court once a week to advise respondents to violence restraining orders before their first court attendances and we also provide community education services,” he said.

“The students and graduates work on a volunteer basis and the Centre could not provide the services it does without the assistance of those ECU students and graduates.”

“The Centre could not provide the services it does without the assistance of those ECU students and graduates.”

However Hair said he believed the Centre had added benefits for students, instilling in them a sense of social justice not usually gained from working in large, private law firms.

“Students volunteering with us work face-to-face with clients and get a real feel for the issues they face,” he said.

“At a large firm they’re much less likely to get that personal, hands-on interaction with clients.”

ECU law graduate Peter Wood is currently completing his practical legal training at JCLC and says the experience gained at the Centre is invaluable.

Wood’s experience at the Centre has convinced him that working at a Community Legal Centre is where he wants to take his career after completing his practical legal training.

“The lawyers here are brilliant and they really know their stuff,” he said.

“They’re always available to give advice to the student volunteers no matter how busy they are.”

Before its partnership with ECU, the Centre had been providing free services to the community’s most disadvantaged and vulnerable since 1996 and originally operated out of just one office in Mirrabooka.

Since joining forces with ECU in 2006, the team has expanded to open a second centre at the Joondalup ECU campus, which employs six staff.

ECU law students volunteer one day a week to the law firm and work directly with clients. Law graduates then complete 75 days of legal training at JCLC.

Hair said his team was looking to expand their partnership with ECU and take on more students in the future.
Research by the numbers

Every year, hundreds of ECU academics discover more about the world through their research – and some of their findings may surprise you.

46.9% of young Australians who drank alcohol last year admitted mixing it with energy drinks at least once in that time. Stimulants in energy drinks delay the onset of intoxication by masking its effects and causing users to drink more than they normally would.

Goggin, L, Bridle, R & Gately, N (2014). The young adult drug and alcohol survey project: an investigation of the drug and alcohol use and behaviours of young adults in Western Australia.

1990 3.68m
2000 5.62m
2010 9.19m

The number of people with dementia in China is expected to grow as China’s population ages, placing considerable strain on the nation’s health care system.


$5.2 BILLION

Potential value on the international carbon market of carbon dioxide stored in seagrass meadows fringing Australia’s coastline.

Seagrass meadows absorb carbon dioxide at more than three times the rate of rainforests but are increasingly under threat from pollution, dredging and coastal development.


The number of deaths attributed to mobility scooter use from 2000 to 2010 in Australia.

The threat you can't afford to ignore
The most dangerous thing in your pocket

One in four Australians is the target of cyber crime each year, yet many individuals and businesses are blithely unaware of the risks posed to data, identity and savings. Ruth Callaghan looks at the security threats facing Australians today – and tomorrow.

A billion dollars can buy a hospital. Two billion would cover the cost for Perth’s light rail. Yet every year Australians lose somewhere between these amounts to the almost hidden scourge of cyber crime.

More than 5 million Australians are scammed, robbed, fleeced, compromised or skimmed yearly – with many are unaware they have become victims – and the threat grows daily.

The Australian Competition and Consumer Commission says the number of reported online scams and fraud, just a subset of the total attacks, has doubled each year from 2009.

For business, the risk is not just financial but intellectual.

Last year, Cisco and Hathaway Global Strategies estimated the value of intellectual property theft through cyber infiltration to be about one per cent of Australia’s GDP, or $15 billion.

Governments are also facing unprecedented threats, through the growing use of cyber warfare, with divisions of information warriors targeting infrastructure and critical systems with keyboards as weapons.

It might sound like a futuristic nightmare but ECU Security Research Institute Director Professor Craig Valli says the cyber threats are a significant problem today, and the pace at which our lives have migrated online means the risks can only grow.

“It is like the use of the road – the internet at the moment has no speed limits, no highway police and no consequence largely for bad behaviour,” he says.

“Governments and corporations are starting to get the message but we are also so far behind that we have a long way to catch up.

Part of the problem is that the use of technology continues to develop on platforms with far less security than the household computer.

“Phones in particular don’t get security updates very often and some don’t get updates at all,”

“Phones in particular don’t get security updates very often and some don’t get updates at all,” he says.

“With the Android platform, 70 per cent of phones in use are running versions of the software with no ongoing security updates, these have confirmed vulnerabilities and there will never be fixes provided.

He says Apple offers updates for iPhones for a lot longer, although there are known vulnerabilities in the iOS system as well.

But then the user has to ensure they install the updates and make sure they are up to date.”

Hannay says the risk posed by phones is centred around the personal data stored on your phone, which can be compromised in many ways.

“There is all that potential private data on your phone and we know that a lot of people have personal images and sensitive data on their devices, so there is always the risk that this leaks to someone else,” he says.

Social media sites also pose considerable risks.

“Using applications that share your location it is possible to get a really detailed profile on an individual: where you work, where you go, where you have lunch each day,” Hannay says.

“These are often packaged and sold as a marketing tool to say ‘this is where your potential customers live, eat and shop’ but as an attacker you can use that information in more damaging ways.

“With enough information it is possible the attacker can phone a bank and begin to go through the process of identifying themselves as the hacking target.

“There is the potential for complete identity theft based on the pieces of information leaked on social media little by little.”

The market for a complete identity is a growing one and Hannay says a full identity might sell for between $300 and $500.

“It doesn’t sound like a lot when you think ‘that’s who I am’ but when you have attackers living in areas with lower costs of living, that’s a significant payday for them,” he says.
Hacking, fraud and ransomware

While users might be unaware of the risks they face, on the other side of the fence the hackers, information warriors and cyber criminals are geared up and active.

In some attacks, theft of data is the goal, with information sold to third, fourth or fifth parties and combined in ways the individual might never have contemplated.

In other attacks, the target is money, with amounts stolen ranging from almost imperceptibly small figures to the life savings of individuals.

Australian investigators looking at well-organised cyber-based investment fraud in 2012, for example, found the median figure stolen was $20,000, with some people losing upwards of $1 million.

Getting people to comprehend the risk to their data, savings and lives isn’t easy. The James Bond nature of many cyber crimes means they the average computer user may dismiss the shady world of online criminals as having little impact on their lives.

Take ransomware, the malicious software that antivirus group McAfee has named as its top threat for 2014, which locks a user’s computer and encrypts data until they pay to have the encryption removed.

Reports last year estimated that as many as two per cent of Australian computers carried the ransomware virus while an attack on just 18 computers at the Queensland University of Technology succeeded in encrypting hundreds of thousands of shared files.

“Using applications that share your location it is possible to get a really detailed profile on an individual.”

The other frontier is the rise of cyber warfare. While Valli says the offensive use of IT by nation states is nothing new, there has been a rapid ‘arms race’ as countries develop new ways of conducting online attacks.

“You have several divisions of information warriors in China,” he says.

“The US has declared cyber space the fifth domain of engagement, after air, sea, land and space, and they, like others, are looking to take an offensive footing.

“I think it is already happening and some people argue there is an ongoing cold war already with nation states attacking each other.”

Shared responsibility

Valli argues that the approach to cyber security is not just a government obligation, but that there needs to be a greater sharing of responsibility by all.

The core message, he says, is that cyber security is everyone’s problem.

“We need a road safety campaign or Slip, Slop, Slap campaign for cyber safety. We have had a fundamental shift in how we operate in society and that education needs to happen.”
Recent ECU research into the susceptibility of businesses in Perth’s northern corridor to attack makes for grim reading.

In a pilot project funded by the City of Wanneroo, City of Joondalup and ECU, members of the Security Research Institute looked at what exposure businesses had to potential attacks and what measures they were taking to protect themselves.

They found four out of five businesses were fail to protect their smart phones or tablets from cyber attack, two out of five had ‘ineffective’ cyber security measures installed, and one in five had no virus protection software on their main computer system.

“Basically one in five businesses is highly vulnerable to worm-based attack, which is pretty bad really when you think about it,” Professor Valli said.

What can businesses do to reduce their risk of attack? Here are the Security Research Institute’s key recommendations.

1. Install anti-virus software on all devices. While not a ‘silver bullet’, it can decrease the overall risk exposure of the business.

2. Ensure system updates happen automatically. Many firms neglect regular updating to protect against newly developed viruses (and 12 per cent of those questioned by the ECU survey reported never updating their software at all). Automatic updates can resolve this problem.

3. Turn off your router when not in use. Some malware is specifically designed to target routers and they can be accessed, compromised or remotely controlled.

4. Turn on the firewall for your devices. The firewall acts as a barrier between your trusted network and other networks. It is designed to filter threats, but must be turned on to do this.

5. Use a malware scanner. The ECU research found almost every business questioned had received ‘phishing’ emails that could introduce malware such as worms or a Trojan horse (something that looks harmless but can be used to damage your system or steal data.) A malware scanner should scan email attachments, documents and downloaded files.

“Basically one in five businesses is highly vulnerable to worm-based attack, which is pretty bad really when you think about it,” Professor Valli says.

Securing your data
With 23,000 students at ECU, more than 2000 staff, and dozens of community partners and initiatives, there is always opportunity to collaborate on something special. As Briana Shepherd finds, this can lead to some unusual – but highly productive – partnerships.
Sharna Bicheno

I’m studying my masters in midwifery at ECU and the MAMS program is part of my course. We have to follow 20 women, and you spend 20 hours with each mother, so it takes a total of 400 hours all up. It’s good because you meet women at varying times in their pregnancies. We can take them on up to 35 weeks but I’ve had women from 12 weeks into pregnancy as well. Brie got in touch with me at 35 weeks; she was a late one. You get to build a real relationship with the women. Meeting and working with them throughout their pregnancies means there is real continuity of care. As part of the experience, you get to know their families and their situations. When you get to the birth, the mothers often seem relieved at having a familiar face around, so I find that very rewarding. Brie’s birth was awesome. I was called in the middle of the night to come in and I actually delivered her baby. As a student you never know if you’re going to get the birth or not. Little Ella is one of 27 babies I’ve delivered so far. It was a good experience and I think Brie was happy to see me as I came in. Afterwards she was just stunned that I actually delivered her baby – I think some women don’t realise how involved you’re going to be. She was very thankful. Recruiting the women for the program can be hard. Sometimes the hospitals let people know but MAMS also has a webpage on the ECU website where mothers can sign up. Students also promote the work we do through Facebook groups and forums such as ‘mums and bubs’, and word of mouth always helps.

Brie Aram

I heard about the MAMS program through my first pregnancy but I actually declined the offer. The second time around I wasn’t offered a part in the program until much later, after I was already past the 30-week mark, through the birthing centre at King Edward. I agreed because I thought ‘everyone’s got to learn’ and the students obviously know what they’re doing. Sharna came out to meet me at my home in Victoria Park and it was nice to have that one-on-one chat before going to appointments together. The best thing about it for me was having her support. The amount of advice and knowledge those girls have is amazing; from day one they know what they’re doing. Sharna is lovely. She’s warm, friendly and kind and immediately made me feel really comfortable in my decision to have a student midwife. It definitely made me more confident going into the labor. I get really nervous at hospitals and having an extra person, who was familiar with the staff and the surroundings, was great.

The Mothers Adopting Midwifery Students (MAMS) program at ECU has repeatedly proved its worth, for both the expectant mums and the students. Brie Aram was approached to take part when she was having her first child but was reluctant. After her experience with 22-year-old midwifery student Sharna Bicheno during her second pregnancy, however, she now wishes she had done it the first time around. As well as the birthing centre appointments, which are the standard this-week check-up, that-week check-up, she came along to extra appointments as well. I didn’t have to ask and she didn’t need to offer, it just happened.

Even though Sharna is younger than me, doesn’t have kids and has been at university for a long time, she could relate. It was great having that relationship woman-to-woman. It was a Wednesday afternoon when I was scheduled to be induced, and Sharna came in while we waited... and waited. Eventually she went home but got a call in the middle of the night when things were progressing. She made it in time and it was wonderful because once she got in there, she was in charge. She got Ella out, she held her, and then she passed her to me.

At the end I was like, “oh my God, you just delivered my baby!” It sounds funny to use the words ‘hands-on’ in this situation but she was. She was amazing. At the end I was like, “oh my God, you just delivered my baby!” It’s even more special knowing the person before and then having them deliver your baby; you develop an unspeakable connection.

I think the program is fantastic. I wish I had done it with my first and I think more people should be open to it. And I’ll definitely stay in touch with Sharna. Even though I know she has 20 other mothers thanking her, you feel like you’ve made a friend.
Dr Magdalena Wajrak

I’ve been teaching for a while, around eight years now at ECU, and what I noticed was the very low number of Aboriginal students studying chemistry.

That concerned me and I couldn’t really understand it. I had been doing a lot of outreach anyway, focusing on high school students, and I decided I wanted to narrow my focus to Aboriginal students.

Jase and I got together about three years ago and had a bit of a chat so we decided we’d try and do something different.

Our workshops bring together the Aboriginal culture from Jase, and then I go in and do a workshop on chemistry, focusing on forensic science.

The aim is to excite Aboriginal students about science and encourage them to study sciences at university and upper high school years.

What I’ve found is that prior to doing the show with Jase I think the students saw me as a bit of an outsider. Obviously not being from an Aboriginal descent I didn’t have a connection. Once Jason joined me – or I joined him – it was a completely different story.

He does his part first and they immediately take to him and then because I’m part of the show I’m already taken in.

Jason starts the workshops focusing on traditional practices, Aboriginal culture and language. He breaks down the physics behind throwing a boomerang and also touches on the chemistry behind making glue for traditional tools.

Then I step in and focus on the chemistry alone, explaining how it can be used to solve crime through forensic science. We do three activities – fingerprinting, analysis to see if someone’s been drinking and testing blood types.

Jason is professional, enthusiastic, super knowledgeable in his area, and just a great bloke.

They see me as being this professional chemist and they see Jason as someone who understands the culture. He can bring the old ways and I’m showing the new ways of science.

We’ve had such positive feedback from the students and they seem to equally like us so we began dreaming big after we realised how well we were being received. We applied for a Higher Education Participation Partnership Program grant at the end of last year and got it.

So this year the grant, along with some prior funding through the National Indigenous Science Education Program, has allowed Old Ways New Ways to expand, and we went on our first big trip to Karratha, which was a huge success.

Jason is professional, enthusiastic, super knowledgeable in his area, and just a great bloke. I’d been doing this on my own quietly for quite some time and it was going well but I didn’t feel like it was growing. I felt a bit frustrated that I wasn’t reaching more students.

It just didn’t have the impact that it has now and I think – well obviously – it’s because of Jason.

“They see me as being this professional chemist and they see Jason as someone who understands the culture.”
Jason Barrow

I studied environmental studies at uni but burned out: got halfway through it and thought, ‘it’s enough. I need to go and work with my hands.’

I’ve tried to reengage in tertiary study but it’s for other people, not for me.

I love clearing a pathway for others though, which is part of my role as the Indigenous Tuition Assistance Scheme coordinator here at Edith Cowan. The other half of my role is as a cultural awareness officer – through our cultural ambassadors program.

It’s through this realm of work I’ve been able to do tours around the building here at Mt Lawley, named Kurongkurl Katitjin, a Nyoongar phrase for ‘Coming Together To Learn’. That’s what universities are all about and I strongly adhere to those values and ethics.

I got yarning with Magda one day and we realised we could tag-team presentations; I really love the tag-team model.

We’re a gender mix, so that’s just fantastic...

We’re a gender mix, so that’s just fantastic, being an Aboriginal person and a non-Aboriginal person, and a male and a female.

While there are these unique differences that bring us together, there’s also a commonality around our determination.

We both keep going until we find a way get a student excited about it. And that was how Old Ways New Ways started.

Finding a champion like Magda is always fantastic. She is passionate, enthusiastic, genuine and authentic.

We definitely play off each other a little bit in our workshops, with different areas of expertise to share.

We were super fortunate when Caroline Bishop, from Engagement and Equity at Edith Cowan, came on board. We wouldn’t be able to maintain our work schedule, in addition to this project, without Caroline coming in and doing the engine room grunt work. For the future it would be fantastic to have this program as a yearly project we run.

Working within the Aboriginal space it’s all about consistency. If you can deliver something consistently it will be slow to take off but then you’ll have super buy-in because it’s a genuine relationship that’s long lasting.

In the end, if you are authentic and you’re passionate about your work, you can show that you want to help people on their way, not hold them back.

To be able to do that, and have some longevity, means the work can grow.
“With Pierre what you see is what you get and he’s pretty blunt. From the very first time you meet him you know he’s going to tell you straight.”
The relationship between supervisor and PhD student at ECU can be a strong one – and that’s the case for Professor Pierre Horwitz and Christopher Kavazos. Christopher came to Perth from Sydney three years ago to study the Lake Macleod salt lake system, several hundred kilometres north of Carnarvon. The project is in collaboration with Dampier Salt, part of the Rio Tinto group, and seeks to map the biodiversity of Lake Macleod, which is 10 times saltier than the ocean, and explore options for its future.

Professor Pierre Horwitz
Dampier Salt had been involved in the potential listing of the Lake Macleod salt lake system on an international register for its biodiversity and other values when I met with them and proposed a program of research for the lake.

The original intention was to nominate Lake Macleod as an internationally significant wetlands system that needed international, national, state and local attention.

It’s so remote and it’s such a harsh environment that it is challenging for people going there – but they should go see it. It’s quite an extraordinary place but there remains a question over how to get people there.

Dampier Salt could see the value in engaging postgraduate students in doing the work and we proposed projects to them that involved honours students, masters students and one PhD in particular, which is the one Chris took up.

We were looking for someone who had a particular set of skills and a particular set of personal attributes and part of that was being able to work in a team in a remote place where everything tends to be intensified.

It’s a harsh environment. It’s salty, there’s no fresh water. It’s quite challenging and working with a mining company adds another layer of challenge.

Part of Chris’s character is he has a thrill-seeker element, but is also careful, and that was important for this research.

The minute we spoke to Chris that we realised he had what it takes.

It has been really important to develop a mutual understanding of this lake and Chris (now) probably knows it better than anyone else – than anyone else ever. He’s walked over the system more. He’s thought about it more.

Part of Chris’s character is he has a thrill-seeker element, but is also careful, and that was important for this research.

The industry partner has truly been extraordinarily accommodating and flexible.

Chris is doing quite a theoretical thing where the direct application of what he’s doing for the industry doesn’t exist yet.

There has been no question about Chris’s dedication to the project, and when an industry partner sees that it just makes it so much easier.

PhD student
Christopher Kavazos
I did my honours degree at the University of Wollongong and was working as a research assistant when I saw that this PhD was advertised.

I came over for an interview, well more a ‘meet and greet’ really, before commencing my studies here in August 2011.

I first met Pierre at the interview. I came over, he picked me up from the airport and I stayed at his place.

He showed me around the university and the facilities, wanted to know a bit about me. It wasn’t a very formal interview.

He told me about the project to understand the ecology and biodiversity of the system and what he required and straight away it sounded like a really interesting place to experience and explore.

Having a project with funding is a big plus and there’s quite an attractive scholarship with it.

Almost three years later, it’s going well. It is a challenging place to work – at one point I was spending 14 days at a time up there, which is a long time considering the isolation and harsh environment.

I’m now in my final six months and I’ve learnt more skills than just the science, including learning what is required to conduct work with a mining company.

We’ve created a pretty close-knit team at ECU which has been really great.

One of the best things about working here is that the postgrads are really friendly with each other. There are a lot of international people; we’re like a big family.

Pierre is my main supervisor; he’s the guy that knows all the theory, probably the only person who really knows what I’m trying to do. I think we’re both really keen to see a conservation effort put towards it and I want to be involved in that.

I think we’ve developed a friendship. We’ve spent a lot of time in the field together...

We have both spent a lot of time up in the lake and have come to respect it. In fact I’d say we’re both come to be quite passionate about it.

With Pierre what you see is what you get and he’s pretty blunt. From the very first time you meet him you know he’s going to tell you straight.

I think we’ve developed a friendship. We’ve spent a lot of time in the field together, and that’s probably strengthened that. We’ve become good mates.
Dr Prue Cormie is a senior research fellow at the Edith Cowan University Health and Wellness Institute, who works closely with Lee Giampietro, a 66-year-old prostate cancer survivor. The two met when Lee signed up to a research program looking at the effects of exercise as treatment for people with cancer. The crossing of their paths has been rewarding for both, despite their different backgrounds and the different stages in their lives.

Lee Giampietro

I was diagnosed with prostate cancer probably four and a half years ago and that was devastating at the time, because no one likes to hear those words: “you’ve got cancer.”

A friend put me onto oncologist Dr David Joseph, at Sir Charles Gairdner Hospital. He talked me through the treatment and associated with it was a six-month research program at ECU with exercise.

I didn’t really want to do the exercise, but in the end I agreed. At first I enjoyed it up to a point, because there were one or two guys there and I got to know them well, but as the group grew it really became fun to go.

All of a sudden what was a chore now became a pleasure.

It has become sort of an unofficial support group. We go out to lunch or for coffees. We even go to have barbecues at someone’s house occasionally.

It’s become a friendship developed through the program and that’s been extremely beneficial for me.

I met Prue during my first six months, when we were initially assessed and set up with our exercise programs.

She’s in charge pretty much but she’s an amazing woman and you would never know she is who she is.

She’s just down to earth – and a beautiful person – there should be more people like her.

I wouldn’t be where I am at now if I had decided that I didn’t want to do the gym program.

I’ll never stop exercising now and it’s all thanks to the whole team here.

This program has shown me just what I can do. It has opened my eyes to a different world.

One of the nicest things is that not one of (the researchers) has stuck their degree out in your face. They are just ‘people’ and they join in the fun.

Prue especially is very passionate, very helpful and she’s always very thankful for anything you do.

I’ve sort of become the front man, of the group. I don’t know why but nevertheless I enjoy it.

It’s something I’ve never done before.

Dr Prue Cormie

The team within the Health and Wellness Institute conduct research exploring the role of exercise as a medicine for the management of cancer. Much of our focus is on prostate cancer.

The project Lee was involved in was looking at how we can use exercise to minimise any toxicities or side effects from a hormone therapy called Androgen Deprivation Therapy, which is a mainstay treatment for men with prostate cancer.

While the treatment is very effective in managing the prostate cancer and minimising any spread, it also has a lot of detrimental side effects – things like losing a lot of muscle mass and putting on a lot of fat mass.

You also lose a lot of the strength and integrity of the bone.

So the core focus of this project was seeing if we could prescribe a specific exercise medicine, an ‘exercise pill’ that could counteract those different effects.

I helped make a program specific for Lee, trying to overcome the health issues he was facing throughout that initial six-month period.

Then we assessed him again and as he wanted to stay on we continued to make sure his exercise program was effective.

It was about maximising his physical and mental wellbeing and really tapping into that group environment.

The thing about Lee is he’s so open to discussing exactly what happens and what he’s going through, so when we ask for feedback he gives really good, targeted information.

The environment for research funding is always competitive but through doing the work with Lee, we’re always coming up with really innovative questions and angles.

In essence it allows us to ask very important questions that are patient-centred.

It’s hard to imagine Lee not being the way he is, he’s got a vivacious, infectious love for just enjoying the moment.

I think early on, going through the treatment and the physiological and psychological changes meant he was a little bit down in the dumps, and that was where I found him.

But the change in a pretty short period of time has been dramatic and he’s been fantastic in getting involved.

We always try to take a personal approach with people. Sometimes, unfortunately, they don’t get that when they are going throughout the cancer journey.

Often it’s just the time we take to care about people and show them we want to help as much as we can that matters the most.

You can’t help but connect with them, especially with someone like Lee – he’s such a loveable guy.
Hugh Jackman launched the Jackman Furness Foundation earlier this year at WAAPA.

The world comes to WAAPA
For more than 33 years, Western Australian Academy of Performing Arts graduates have found their place on the international stage. Now, with new funding support, WAAPA wants to draw new international talent to Perth.

WAAPA’s Director, Professor Julie Warn AM, says the Academy’s success is the result of constant effort.

“We are very industry focused so all the staff who teach at WAAPA are really heavily connected with their discipline areas, and still working in most instances,” she says.

“It means we have a finger on the pulse of what’s happening not just in WA but nationally and internationally.”

But the flipside to WAAPA’s strong years of export – with its best and brightest forging stellar careers in the performing arts around the world – is the growing interest overseas artists have in the academy’s work.

Thanks to WAAPA’s reputation, and that of its highly committed staff, a host of international artists have come to recognise the talent that walks the halls. At any given moment, WAAPA can be playing host to a New York saxophonist working with jazz students or a Swedish classical guitarist running workshops. A guest director from Sydney might be leading young actors or an artistic director from China could be choreographing dance.

This year has seen British theatre director Michael Jenn direct third-year acting students in The Resistible Rise of Arturo Ui, while New York opera coach Deborah Birnbaum and British-based piano accompanist Dr Graham Johnson provided master classes at the WAAPA International Art Song Festival.

“Our aim has always been to assist our students achieve their artistic dreams,” Warn says. “We want them to achieve personal excellence, whilst at the same time maintaining a strong sense of collegiality and community.”

“That’s why we provide them with the best tuition and experiences available and it is why we invite guest artists of the highest calibre to work with the students, to guide and inspire them – and to eventually provide opportunities for them.”

Attracting those artists is neither simple nor cheap, however. Whereas an international actor or leading musician might pass through Sydney or Melbourne on tour – lending their experience to acting or musical schools while there – Perth is off the tour circuit.

This means flying someone west at additional cost or bringing them direct to Perth. Warn says students in the past have raised funds to cover the travel and costs of a particularly sought-after artist, but WAAPA has long been in need of broader community support.

It was a key message delivered by alumnum and renowned actor Hugh Jackman, who returned to WAAPA this year to launch the Jackman Furness Foundation for Performing Arts. After donating $1 million to the foundation to support WAAPA’s work, he convinced WA philanthropists to add a further $4 million, as part of a goal to form a $10 million fund that could back WAAPA, as well as other performing arts training organisations around Australia.
The foundation of this place is its teachers— that’s what we are here for,” he said.

“Every form of the arts is represented here and it is unique. There is nowhere like it in the world and everyone in the world knows of WAAPA.”

While the academy had earned international renown, Jackman said it equally needed Western Australians to support the performing arts, urging greater recognition of the asset they had in their own backyard.

“I want WAAPA treasured here as much as it is elsewhere,” he said.

“We want to stay as we are now highly represented in music, theatre, movies, the arts – in every way.”

External funding, whether from the Jackman Furness Foundation or direct to WAAPA via the ECU Foundation, will assist WAAPA in securing leading performers, directors, choreographers and artists, investing in the educators who can help guide students to new heights.

One of these is Canadian violin soloist Alexandre Da Costa, who has delivered a recent showcase concert at WAAPA and returns in January to take up the role of Associate Professor, Classical Performance.

While Perth might feel remote to those who live there, Da Costa says that as someone who travels the world for his music it is not a barrier.

“In Australia, I feel there is the seriousness I was looking for in the university community, just like in the big Ivy-league universities in the US and Canada – universities where musical studies not only include performing, but also research and complex academic paths,” he says.

“As a Canadian that has lived half of his life in Europe, it has been challenging to find a place where I would feel comfortable and complete, both from professional and personal points of view.

“Australia, and Perth in particular, is an absolutely ideal place for me.”

Considered one of the finest violinists in the world, Da Costa says WAAPA provides him an opportunity to work with a strong team to develop student talent.
The dream factory that is WAAPA does more than attract international artists; it is a draw card for students from other states as well.

For Jonny Hawkins the trip from Sydney to Perth required total commitment to his course which meant leaving work, rebuilding networks – and sleeping in people’s driveways.

“When I first moved over I was living in a bus,” he says. “It was the only thing that made sense because Perth was so expensive, and I’d park in people’s driveways and they would let me run an extension cord to the house.

“I did that for 18 months because you work at WAAPA Monday to Friday nine to five or seven to seven when you are busy, so it is very hard to have a part-time job. But it is absolutely worth it.”

Long trip west is one worth making

Another student to make the journey was Tasmanian Christabel Fry, who says her “addiction to theatre” began when she stage-managed two musicals at college.

Encouraged by her teachers to apply to WAAPA, she was drawn both by its reputation and its Stage Management course.

“In the end I became so attached to what WAAPA had to offer that I didn’t even apply anywhere else,” she says. “I was determined to study here.”

While moving across country was a big shift, having housing on campus was a big help, and the staff made the transition easier.

“Relocating was a big step of faith and I did find it difficult at first,” she says.

“The staff were (and are) always happy to provide extra support if needed. I still remember first year as a tough year with a heavy schedule but also the excitement of being a student at WAAPA.”

Fry has just recently completed a stage management internship in Boston with the American Repertory Theatre, organised by Nomad Two Worlds and with the support of the Jackman Furness Foundation and Minderoo Foundation.

“The skills and experience I built up at WAAPA were invaluable.”
Since 2006, groups of ECU Photomedia students have visited Bangladesh, immersing themselves in the history and culture of the country, meeting new people and uncovering unique stories.

The five-week tours are part of ECU’s innovative Bangladesh Photomedia Summer School program, which is available to students every two years.

While in Bangladesh, the budding photojournalists engage with students from Pathshala South Asian Media Academy, the local community, and non-government organisations to research and photograph in-depth stories.

Lecturer Duncan Barnes says the benefits for students involved are both personal and professional.

“They make lifelong friends and are inspired to achieve and work on projects well beyond the scope of the unit that they complete as a result of the workshop,” he says.

“Professionally, it’s also a chance to engage with experts in the field of photojournalism on a level that would not be possible without a study abroad program.”

The next Bangladesh Photomedia Summer School program will run in January 2016.
Events

NOVEMBER

GUESS WHO’S COMING TO DINNER?
Roundhouse Theatre, WAAPA, Mount Lawley Campus
14–20 November
Do they like Mozart or Madonna? Will it be Gluck, or Gilbert and Sullivan? In a spirit of fun, adventure and entertainment, we invite our favourite stars to dinner to share their favourite songs and arias.

JUST WORLD LECTURE
Joondalup Campus, ECU
25 November
Monash University’s Associate Professor Pamela Snow will focus on what oral language competence is, and what social, biological, and cognitive factors underpin its development from infancy into early adulthood.

SYNCHRONICITY
Geoff Gibbs Theatre, WAAPA
15–22 November
WAAPA second and third-year dance students perform a host of pieces from leading choreographers as part of the program’s final dance season of the year, including Sydney Dance Company Director Rafael Bonachela’s acclaimed The Land of Yes and The Land of No.

FLOURISH - SCHOOL OF COMMUNICATIONS AND ARTS GRADUATE SHOW
Mount Lawley Campus, ECU
From 27 November
This annual event showcases the works of our graduating students from areas including Design, Visual Arts, Photomedia and Film and Video. This free public event is an opportunity for graduating students to celebrate their time at university by displaying their best work to parents, fellow students, industry professionals and potential employers.

MUSIC UNDER THE STARS
Joondalup Campus, ECU
29 November
The fantastic outdoor concert featuring a host of WAAPA graduates and other musicians is back again for 2014 after a sell-out year in 2013.

DECEMBER

2014 SRI SECURITY CONGRESS
Joondalup Campus, ECU
1–3 December
This event hosts five security-based conferences over three days, and draws together all areas of security professions and disciplines. http://conferences.secau.org/

GRADUATION CEREMONIES
Perth Convention and Exhibition Centre
31 January and 1 February
The University bids farewell to its graduating class during five ceremonies across two days. The students join our network of more than 130,000 alumni around the world.

FEBRUARY

SOUTH WEST GRADUATION CEREMONY
Bunbury Regional Entertainment Centre
28 February
Students from ECU’s Faculty of Regional Professional Studies in the South West parade through the main streets of Bunbury before their graduation ceremony.
For more information on ECU events, visit www.ecu.edu.au

JANUARY 2015

CONOCOPHILLIPS SCIENCE EXPERIENCE
Joondalup Campus, ECU
20–24 January
The science experience lets high school students engage with the University’s science programs as part of a four-day course hosted by a team of ECU scientists and engineers from the Faculty of Health, Engineering and Science. www.scienceexperience.com.au
Teaching the teachers

Erasmus Norviewu-Mortty travelled halfway around the world to investigate why some schools in his native Ghana were better than others. He talks to David Gear about what he found – and why he has helped to set up a teacher college as a result.

Erasmus Norviewu-Mortty lives and breathes education.

The native Ghanaian has made it his life goal to understand what makes for a successful school.

While working as a teacher in Saboba in rural Ghana, Dr Norviewu-Mortty became fascinated by the disparity in outcomes between ostensibly similar disadvantaged rural schools.

“There were schools in the same area that received the same level of funding from the government, but the outcomes for students varied wildly,” he said.

“This got me thinking: what is the difference, and how can I learn what is working in the successful disadvantaged schools and apply it to the schools that were struggling?”

Dr Norviewu-Mortty, who is also a Catholic priest, wrote a one-page research proposal and began applying to universities to study for his PhD in Educational Leadership.

“I got a letter from ECU saying my academic record qualified me to try for a scholarship if I was interested, which of course I was,” he said.

“I found that the key difference between high and low-performing disadvantaged schools was the principal,” he said.

“Schools that had a consultative principal with strong links to the local community performed well, while those with principals who operated in a dictatorial way performed poorly.”

Not content with having identified the problem, Dr Norviewu-Mortty didn’t wait until he had graduated with his PhD to start working towards a solution.

To this end, he worked to establish the St Vincent College of Education in Yendi, Ghana, based on the education principles he set out in his thesis.

“The buildings are almost finished and we will begin accepting teaching students next year,” Dr Norviewu-Mortty said.

“The aim is to train rural locals as teachers so they can stay in their villages and work as teachers.”

Dr Norviewu-Mortty said that given ECU began as a teaching college more than 100 years ago, it was the perfect place for him to study.

“I am just so grateful not just to ECU for all the support they have given me, but also to all my Aussie friends I have met while in Perth,” he said.

“Three lecture halls and four offices of the teaching college have been funded entirely by the generosity of the Perth community. I will never be able to thank people enough.”

Dr Norviewu-Mortty will return to Ghana early next year to begin work at the teacher college.

If you’re an ECU graduate, you can take advantage of a range of benefits available to the ECU alumni community. Ensure your details are up to date at www.ecu.edu.au/alumni
The Last Word

A clear and present threat

After yet another shark attack on a surfer off Western Australia’s beaches, South West surfer and science lecturer Dr Rob Holt looks at what measures are needed to keep ocean-goers safe.

It was the flashing lights from the approaching emergency vehicle that diverted my attention. After enjoying some waves with my 13-year-old son, I was homeward bound for a deserved espresso. But seconds after the ambulance passed, my post-surf euphoria evaporated with the buzzing telephone: “Have you heard about the shark attack at Bonies?”

Questions rolled over in my mind. Did I know the victim? A surf mate? One of my students? A Dunsborough identity? We had been in the killing field 30 minutes before the assault. That could have been me — or my young bloke. Sunday, September 4, 2011 was a day that rocked Cape Naturaliste’s surfing community as local attitudes towards sharks profoundly changed.

Kyle Burden was one of five surfers to have perished as a result of shark attack in South West WA in the past decade, and one of seven Western Australian ocean-goers who have died in the past four years, in an unprecedented spate of fatal attacks. In each case, the culprit was almost certainly a Great White, and the deaths have forced surfers to ponder.

While we recognise the potential threat posed by marine predators, in most cases the consideration of shark confrontation does not deter us from our habit. But we expect to enjoy our lifestyle – without being on Old Whitey’s menu.

The current climate of attack raises many questions about how surfers should respond to the WA State Government’s moves to mitigate the risk posed by sharks. The most contentious tactic, a baited drum line program, met with considerable opposition, even though the undeniable intention of the scheme was aimed at increasing public safety. The decision not to go ahead with the scheme this summer has left some people feeling pleased but it doesn’t make surfers safer.

The local community favourably received a shark barrier in the placid Dunsborough waters in 2013. A similar structure is planned for Busselton with talk of 20 others being added to suitable beaches in WA. Net technology has unquestionably improved. They are effective, unobtrusive and pose no threat to marine life, unlike traditional shark proofings.

However barriers will have no impact on surfers. You can’t net surfing breaks. The reason these rare sites are used by surfers is because they are swell magnets, places that constantly receive the Southern Ocean’s raw power and produce waves that would destroy anthropogenic structures. Even if a physical barrier successfully protected one suitable surfing locale, surfers journey to myriad South West breaks depending on swells, winds and tides.

So fundamental responsibility must come down to the surfer. We all like a minimalist, lightweight approach with our wave riding equipment but individual electrical shark deterrents have become smaller, less expensive and user-friendlier. Do I purchase a new wetsuit or a ‘Shark Shield’?

Surfers need to be thoughtful about ocean conditions and seasonal variations. Most Great White encounters have occurred during the winter/spring period, the nexus coinciding with Humpback Whale migration. The onus has always been on the surfer: If you don’t feel comfortable, then don’t go out.

Ultimately more Great White research is essential. Tagging programs and migration monitoring is part of a suite of explorations required to learn about these ancient animals.

These are the sharks that have down-south surfers jumpy.

Nonetheless, there is a strong belief among some surfers that if a shark is loitering in a specific location, it should be removed from the gene pool. We talk about shark attacks being ‘mistaken identity’ of surfers for seals but perhaps one or two of these intelligent predators have learned there’s opportunity for easy pickings. Anecdotal information, confirmed by recent sightings, suggests at least one mature Great White has curtailed its migration to remain within Geographe Bay. These are the sharks that have down-south surfers jumpy.

Perhaps the Department of Fisheries needs to re-evaluate the existing system and consider a more precise version of the drum line program, aimed at swiftly and effectively removing specific sharks that pose a clear and present threat to human life.
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