Living with fire

Also

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- Inflatable fashion
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ECU GLOBALLY RECOGNISED
THAT’S HOW UNIVERSITY SHOULD BE

ECU has been named in the Times Higher Education (THE) 100 under 50 rankings for 2015. Recognising the world’s 100 best universities under 50 years of age, the rankings are a global showcase of a new breed of university. They focus on performance indicators such as teaching, research and international outlook, and highlight universities that are developing at an exceptional rate.

ECU has been named in the QS World University Rankings by Subject. For the third year in a row ECU’s Education and Communications & Media Studies were named in the top 200 in their respective subject areas in the world. The rankings highlight the world’s top universities in 36 individual subjects, based on academic reputation, employer reputation and research impact.

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13 Living with fire

Bushfire season is an inevitable part of living in Australia, but as David Gear writes, researchers are developing ways to mitigate and reduce the ever-present threat.
ECU scores
Top 100 ranking

ECU has been named in the Times Higher Education 100 Under 50 rankings for 2015. The list, which ranks the best 100 universities globally under the age of 50, focuses on objective performance indicators such as teaching, research and international outlook, rather than the subjective ‘academic reputation’ of other rankings. “It provides a glimpse into the future, showcasing not those institutions with centuries of history, but the rising stars which show great potential,” says THE editor Phil Baty.

Feral cats enjoy feast

Feral cats are estimated to eat tens of millions of native animals each night in Australia. In research published in the Journal of Biogeography, School of Natural Sciences PhD candidate Tim Doherty and colleagues showed feral cats kill 400 different kinds of animals, including at least 16 species considered globally-threatened. The study found that programs to reduce rabbit populations could inadvertently lead to cats prey-switching to small native animals. “This means that land managers should use a multi-species approach for pest animal control,” Mr Doherty said.

iPrep links students and industry

A new program is giving WA PhD students the opportunity gain real-world experience while helping to solve complex problems with industry partners and businesses. iPrep, developed by ECU in collaboration with four other WA universities and the Office of Premier and Cabinet, was launched in March. The first group of companies to benefit from students’ expertise include Bombora WavePower, Fortescue Metals Group, CingleVue and AdvantageAir.

Actress joins WAAPA

Award-winning Australian actress Glenda Linscott has been appointed the Coordinator of Acting at the Western Australian Academy of Performing Arts (WAAPA). Linscott brings a wealth of acting and teaching experience to her new role. She has appeared in television productions including Prisoner, Murder Call, Neighbours, and Winners and Losers. Lead roles for major theatre companies include Steaming, Daylight Saving, Speaking in Tongues, Crimes of the Heart, and Dinner with Friends. “I’m very excited about working with and training the next generation of elite actors,” she said.

Glenda Linscott.

Stray cats.
New building open for business

Ngoolark, ECU’s newest building, was officially opened on May 4. It combines ECU’s student services under one roof, as well as IT, research and innovation functions. The design of the $72 million project at the Joondalup Campus incorporates local Indigenous history and culture, with ‘Ngoolark’ the Nyoongar name for the endangered Carnaby’s black cockatoo.

New courses launch

New for 2016 is the Master of Marketing and Innovation Management. The course is designed to provide managers with the contemporary marketing skills required to succeed in today’s business environment. ECU will also offer redesigned Bachelor degrees in Arts, Design, Media and Communications and Contemporary Arts next year. The new courses feature an emphasis on professional engagement and employment opportunities for students.

Study builds on breakthrough

A major study into an innovative treatment for Huntington’s disease is underway in the School of Medical Science. The NHMRC-funded project builds on research published earlier this year in which researchers were able to regrow parts of the brain affected by the rare form of dementia. The study, published in Brain and Behaviour, found supervised exercise and cognitive training significantly increases grey matter volume in parts of the brain that degenerate from the disease.

Robot lab expands

The School of Engineering has welcomed new additions to the Robotics laboratory — six NAO Evolution humanoid robots and Baxter the robot. Baxter is a 1.8 metre tall humanoid robot with two 7-axis arms, integrated cameras, sonar, torque sensors and an animated face. NAO is a 58cm tall humanoid robot. Both offer students the opportunity to use cutting-edge technology to bring their applications to life.
Scholarship promotes indigenous history
Perth teacher Sarah Booth has been awarded the Dr Susan Holland Scholarship to undertake a PhD investigating how to improve the teaching of Aboriginal History in WA schools. The scholarship is worth $30,000 over three years and is available to teachers who want to pursue their PhD studies in education at ECU.

Murder grips Fremantle
Fremantle’s historic West End is the setting for a new fiction novel about a modern day killer by author Dr Leigh Straw. Limestone is the first in a series of three books by School of Communications and Arts history lecturer and author Dr Straw that focus on crime in the port city. This book is a departure from her previous non-fiction works, which include Drunks, Pests and Harlots, a factual book which shed light on the female criminals that stalked the seedy streets of Perth and Fremantle in the early years of the twentieth century.

Sex registry warning
The first study into WA’s controversial online sex offender registry by ECU researchers found there was a chance the website could lull users into a false sense of security regarding their safety. The results of the survey showed many users believed an absence of offenders listed in their neighbourhood was evidence that no child abusers lived nearby. The study’s authors have warned the vast majority of sex abuse takes place in the home.

Boost for Joondalup start-ups
One of WA’s most successful incubators of small businesses has expanded its range of support services. Business Station Inc. has been appointed to manage the ECU Business Innovation Centre, which was established in 2003 and has since seen more than 100 businesses graduate. In addition to existing services, ECUBIC will now offer advice on new funding opportunities, business development, management and digital engagement.

Lecture theatres reimagined
ECU continues to provide state-of-the-art facilities for its staff and students with the opening of the brand new Engineering Pavilion on the Joondalup Campus housing high-tech labs for a host of engineering disciplines. In addition one of the Mount Lawley Campus’ primary lecture theatres has been refitted to modernise the space and allow musical performances to take place as well as general teaching.

Scholarship promotes indigenous history
Perth teacher Sarah Booth has been awarded the Dr Susan Holland Scholarship to undertake a PhD investigating how to improve the teaching of Aboriginal History in WA schools. The scholarship is worth $30,000 over three years and is available to teachers who want to pursue their PhD studies in education at ECU.
Data analysis has allowed modern coaches to become more systematic in their approaches, increasing the statistical chance of success. But the over-reliance on this type of data means coaches tend to lose the feel for the game, lack coaching instinct and often lose touch with what is termed the ‘art’ of coaching.

At the same time, increasing knowledge about how the body signals various responses has given rise to medical breakthroughs that have allowed for the development of drugs that are used for ethical, medical reasons. These drugs often have performance-enhancing properties, which can be too tempting for athletes and coaches to avoid. Recent research indicates about 30 per cent of modern athletes have used or are using performance-enhancing drugs. While these drugs significantly elevate sports performance it is undeniable that their use negatively impacts on sport as it violates all sporting codes of ethics.

Dr Greg Haff  
Senior Lecturer, School of Exercise and Health Science

What should not be lost is that sport is not measured by the amount of science involved but by the heroes it creates. We marvel at the athletic prowess and skills of competitors — not the hours of training undertaken. We are excited by their character and determination — not the science program that helped them reach peak condition.

Science is the supporting act not the star. It may play an increasing role but there will always be freakish stars whose natural ability will transcend anything created in a lab.

David Smith  
Coordinator of Undergraduate Broadcasting, School of Communications and Arts

In a sporting context, the use of science can either be legal or ethical (such as in specialised training regimes) or illegal or unethical (such as in performance enhancing drugs). Both practices enable a much higher level of athletic performance, but one provides an athlete with an unfair advantage and potentially compromises the foundation upon which the interest and excitement of a sporting contest rests — the uncertainty of its outcome.

The unethical use of science is increasingly being scrutinised and played out in the media and managed by sports organisations, player managers and their lawyers. Why? Because sport is big business — the media and sponsors need sport, and sport needs the media and sponsors. And, for the media, unethical sport practices are even bigger business. It’s the complexity of the dynamics between science, business and sport that can potentially compromise the sporting experience.

Dr Ruth Sibson  
Senior Lecturer, Sport Management, School of Business
We all know how hard it can be to change someone’s mind, and Associate Professor Paul Chang from the School of Psychology and Social Science knows this better than most.

He spends much of his time researching ways to encourage people to do more than merely change their thinking, and instead transform their behaviour.

And his current focus is on finding ways to help people change one of the most difficult behaviours of all — smoking cigarettes.

“It’s like the saying, you can lead a horse to water, but you can’t make it drink. What I want to do is surround the horse with water so it has no choice but to drink.”

“Anti-smoking campaigns are so fixated on the health angle and the risk of cancer. While this is a very important part of the solution, it suffers from the fact that when you tell people that smoking means that have 50 per cent chance of dying from cancer, they generally rationalise that they will be in the 50 per cent that doesn’t get cancer.”

Instead, he believes, the problem needs to be attacked from multiple angles.

“We need to appeal to people’s personal motivations. We need to increase the price of cigarettes. We can’t just rely on one strategy or one message,” he says.

“It’s like the saying, you can lead a horse to water, but you can’t make it drink. What I want to do is surround the horse with water so it has no choice but to drink.”

One innovative project Chang has been working on is a cigarette pack that allows smokers to record an audio message that plays every time they open the pack.

“The aim is to tap into people’s own personal motivation to quit smoking,” he says.

While the trial is still in its early days, the responses I have been getting from some of the smokers testing the packs have been amazing.

“One lady has recorded her grandson crying. Another person has recorded themselves saying ‘just wait five minutes.’”

As well as smoking, Chang is interested in encouraging people to look after their hearing.

“Between iPods, iPhones and loud music at concerts, it is all too easy for people, especially young people, to cause irreparable damage to their ears,” he says.

He figured the best way to educate people about the potential dangers of hearing loss was to show them what it sounds like.

The result was the Sonic Silence Exhibit, which has been on display at Scitech for almost three years.

“The exhibit gives people the experience of what it is like to try to follow a conversation if you have hearing loss,” he says.

“Hopefully by experiencing how frustrating and socially isolating hearing loss can be, we can help encourage people to change their behaviour before it’s too late.”
**Q1** What attracted you to a career in research?

This will sound like a cliché but it started with a chemistry set I was given for Christmas as a boy. I was certain I would pursue a career in chemistry and that is how it turned out. I undertook a Ph.D. at Newcastle University in the UK on copper and iron-containing proteins. To continue in research I moved to the USA as a NATO Research Fellow at MIT and then to Edinburgh University. I have always found research to be hugely fulfilling and something that greatly enhances teaching.

**Q2** What was it about Perth and ECU that prompted your move across the world?

I hadn’t really thought about moving to Australia but when the head-hunters came knocking with a request for me to have a look at ECU I was intrigued. It only took one visit for me to fall for Perth. It truly is a gorgeous city and the weather — well coming from Edinburgh what can I say! And the University — I loved it from my first exposure. The people were incredibly welcoming, the campuses absolutely beautiful. The more I researched and learned about ECU, its values and its student-centred approach, and the massive potential the University has, the more I was convinced this was a move for me. I have to say it is a huge privilege and honour to be the Vice-Chancellor of ECU.

**Q3** What do you do in your spare time?

I am an insatiable reader (I am just finishing Bill Bryson’s Down Under which I highly recommend) and a lover of music, film and theatre so the promise of all those WAAPA performances I can now attend has me drooling with anticipation. I love travel and already have plans for my exploration of Western Australia. In sport then it would have to be cricket and I am resigned to watching many forthcoming victories for Australia over England. Finally, I am partial to a nice glass of wine so a trip down to the Margaret River vineyards is definitely on the cards.

**Q4** Have you chosen an AFL team to barrack for yet?

I’ve been told I have to support the Eagles so I might make life interesting in the office by opting for the Dockers! I will also be giving my support to the Western Warnors and the Perth Scorchers in cricket and hope to see some games at the WACA. My time in the USA got me interested in baseball and I see Perth has quite a successful team in the Perth Heat so I might try and get along to see the odd game.

**Q6** What excites you about higher education in Australia?

The higher education sector in Australia is very dynamic and is facing some huge challenges — and that brings a lot of excitement. I have been following the effects of deregulating student numbers and the debate on fees with interest. Higher education, by its very nature, is expensive and ways have to be found to fund it. In England (but not Scotland) the government decided to essentially unc cap student places and increase the cap on fees to £9,000. As a result most universities moved to the £9,000 fee. In Australia it is possible that fees could be completely deregulated. There is obviously a danger here; in the USA student debt is now over one trillion US dollars with something like a third of this unlikely ever to be paid off. The question of sustainability therefore becomes critical. What worries me is how the fee deregulation issue has become a political football. Australian higher education is admired around the world. The USA and the UK regard Australia as a major competitor in transnational education. The sector gives Australia prestige around the world and is an excellent example of the projection of ‘soft power’. For any government to put this in jeopardy defies belief. As an eternal optimist, I am hopeful we will get things right. One thing I am certain of is that ECU will act in a fair and responsible way to its students.

**Q5** Besides the weather what do you think will be the biggest difference living in Australia compared to Scotland?

Let’s not underestimate the weather!
ECU journalism students are keeping a record of how mining has transformed this northern town.

It used to be a sleepy town where cows outnumbered people, but Onslow’s population is exploding now that Chevron has come to town.

With the $29 billion Wheatstone LNG project and BHP Billiton’s onshore gas treatment plant nearby, Onslow’s population is tipped to at least double to more than 2000 people within the next two years.

But such growth brings challenges, so Edith Cowan University students have embarked on a remarkable project that tracks, documents, and publishes the changes as they occur.

Since July 2012, ECU journalism students and staff have been visiting every six months to prepare stories about the huge physical and social changes within Onslow’s community, as part of the Tracking Onslow project, funded by ECU and the Shire of Ashburton.

The stories and photographs produced by students are then published in a magazine by the same name.

Project leader and ECU senior journalism lecturer Dr Kayt Davies says Tracking Onslow has been a great opportunity for students to see the real Australia and meet people most affected by the resource industry.

“"The resource companies have committed a huge amount of money and this is clearly changing the fabric of the town,"“ Davies says.

For the community and Shire, it is a chance to capture some of the changes and enable residents and businesses to reflect on the transformation.

""The resource companies have committed a huge amount of money and this is clearly changing the fabric of the town,"“ Davies says.

""It’s changing the population, the shape of the roads and buildings. It’s bringing in air travel. There is history happening."

Davies says the students have described a town experiencing deep divisions between winners and losers in the expansion, including those struggling with the cost of property and access to infrastructure.

Communications Honours student Karma Barndon has worked on several editions of Tracking Onslow. She will return to Onslow in July for the sixth and will use the stories as data for her honours project.

""The project has been invaluable in building my confidence — at first it was just dealing with stories about the town and then it evolved into investigative work,"“ she says.

""You are negotiating with all the powers in the town and I have really enjoyed that."“ Davies says.

The university hopes that over time the project can help Onslow residents understand the uneven impacts of the localised boom, enabling the community to pull together.

More about the project can be seen at www.trackingonslow.net
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.

The number of species found to be part of feral cat diets in Australia.


Percentage of 13–16 year olds with access to the internet via a smartphone, up from less than 30% four years ago.


The likely decline by 2050 in the endangered western ringtail possums’ habitat in WA’s South West due to anthropogenic global warming.

Molloy, S. et al (2014). Species distribution modelling using bioclimatic variables to determine the impacts of a changing climate on the western ringtail possum (Pseudocheirus occidentalis; Pseudocheiridae), Environmental Conservation, Vol 41:2, 176-186

The amount of energy that could be saved by producing bricks out of the waste from iron ore mines.

Living with fire
Bushfire season is an inevitable part of living in Australia, but as David Gear writes, researchers are developing ways to mitigate and reduce the ever-present threat.

Every year Australians, particularly those living in regional areas and on the urban fringes, brace themselves for another hot dry summer where a single spark can trigger disaster.

Residents of the South West town of Northcliffe were reminded of this in February when lightning strikes sparked a massive blaze that forced the evacuation of the town and eventually burnt through more than 158,000ha.

The town was largely spared due to the herculean efforts of career and volunteer fire fighters, but the massive blaze illustrated that bushfires are an inevitable part of life in our part of the world.

“It’s something that is being tackled by Edith Cowan University criminologist Dr Natalie Gately, who is working with a number of WA agencies, including the WA Police.

She is also in discussions with the Department of Corrective Services on how to profile young people who light fires and how to tackle the problem of repeat firesetters.

“The motivation of people who light fires is very rarely the desire to cause destruction or harm,” she says.

“It is much more common for people to light fires to gain attention or because they love seeing the sirens and lights of the authorities who respond to the fire.”

What is not inevitable is the amount of destruction they cause, and researchers are working with emergency authorities and communities to ensure affected areas are better protected — and can recover faster — from the ever-present threat.

The sheer number of fires is overwhelming. More than 50,000 bushfires occur across Australia each year. Up to half of those are deliberately lit or suspicious. In WA alone, there are between 50 and 60 mostly small fires ignited deliberately each week in summer.

Given that breakdown, finding a way to identify arsonists and stop them lighting fires is considered vital in reducing the risk posed to the community.

Gately says honing in on the specific motivations of repeat firesetters is key to reducing the number of deliberately lit fires.

“We know that only about one-third of children who light a single fire will go on to become repeat offenders,” Gately says.

“At the moment I am working with Professor Rebecca Dooley at Bond University on developing a profile of the young repeat fire-lighters.

“If we can develop a model that will predict whether a child who has lit a fire is likely to go on to become a repeat offender, we will be able to direct interventions and resources towards those individuals.”
Intervention helps to curb the number of fires but catching those that start early is also vital. While smoke detectors have been mandatory in WA homes and businesses since 1997, bushfire authorities have to rely on members of the public seeing and reporting fires.

In a state as big as WA, that can often mean the fire has grown to significant size and intensity before a report is made.

Now, thanks to advances in wireless sensor network technology, ECU researchers have developed a technology that can detect far more than just smoke and could revolutionise how bushfires are detected and fought.

Head of the School of Engineering Professor Daryoush Habibi says the low-cost sensor device can be placed in bushfire-prone areas to give an early warning of a fire starting, or placed around an already burning fire to give fire fighters a real-time 3D picture of the fire’s behaviour.

“Each device is equipped with multiple sensors, including infrared to detect the heat generated by a fire, a camera for environmental imaging, as well as a gas sensor that can detect smoke, oxygen levels and the presence of harmful airborne chemicals,” Habibi says. “They transmit data via radio waves to a central location by radio communication, giving the command centre a real-time picture of what fire fighters are facing on the ground, to enable them to direct limited resources to where they are needed.

“The key is reducing power consumption to a minimum to enable their batteries to last years without external power or maintenance in the field.”

As well as detecting and monitoring bushfires, School of Engineering researchers have invented a device that will allow fire fighters to do their work more safely, known as AircheQ.

“AircheQ is a low-cost, long-life air quality monitoring system that can detect nine different airborne contaminants,” he says.

“The technology could easily be integrated into fire fighter’s protective clothing to create a smart vest that could give them an early warning that they are entering an area where harmful levels of gasses are present and they need to use their breathing apparatus.”

Both technologies could be transformative for detecting and fighting fires — and protecting the people on the front line.

The challenge is getting more equipment there faster than the fire can spread.

Ballard says one of the best ways to prevent major bushfires is to get fire fighting assets to them while they are still small.

“It is a huge advantage to get to a fire before it can grow legs and take a run,” he says.

“The challenge is getting more equipment there faster than the fire can spread. A small fire can be dealt with by a light tanker, but it can quickly outgrow that resource.”
Even after the blaze has passed the damage continues

Bushfires can destroy more than property, crops and lives. They can devastate communities, impacting hearts and minds to the point where many people never return to rebuild.

Associate Professor Julie Ann Pooley from ECU’s School of Psychology and Social Science has long worked with communities devastated by natural disasters.

She says building the capacity to recover needs to happen long before disaster threatens.

“The stronger those person-to-person links are in the community the better they are able to recover.”

Pooley says communal facilities such as town halls, bowls clubs and even the local pub are important in building community resilience.

“While a town hall is just a physical building, the person-to-person contact that it enables gives the community a well of resilience that can be drawn on in the aftermath of a disaster,” she says.

“These types of facilities and a strong sense of community are lacking in many of the large sprawling suburbs on the urban fringe, which are quite susceptible to bushfire.

“This may result in these suburbs struggling to recover and rebuild in the event of a fire.”
Recovery is also important for the natural environment. Despite the popular perception that bushfire is “good” for the bush, Dr Eddie Van Etten from ECU’s School of Natural Sciences says that is not always the case.

“While some plants and animals are well adapted to bushfires, there are many that can take decades to recover,” he says.

“For example, there are native pines and figs that generally grow on the top of rocky hilltops that are generally killed outright if a fire goes through, so they don’t bounce back.

“There are also small mammals and lizards that require a dense layer of plant material to live in, which can take decades to build up after a fire.”

Dr Van Etten says one way to assist the recovery of flora and fauna after a fire is to leave pockets of bushland unburnt during prescribed burning.

“If there are sections of bush that haven’t been burnt in a long time, they can act as a sort of repository of plants and animals that can then colonise the burnt sections,” he says.

“In areas on the urban fringe one of the main problems after a fire is that invasive weeds can quickly take over the area.

“Targeted weed control carried out in these burnt areas following a fire can help give the native plants a chance to come back.”

“The motivation of people who light fires is very rarely the desire to cause destruction or harm.”

– Dr Natalie Gately, Criminologist
A NEW PATHWAY TO A PHD
THAT’S HOW UNIVERSITY SHOULD BE

If you are passionate about research, ECU’s Graduate Research School is launching a new four-year Integrated PhD, that combines research preparation (one year) with a research project (three years). This new pathway to research is available to Master by Coursework graduates and some four-year undergraduate degree holders.

The research preparation provides students with strategies for a successful research journey, appropriate research design and methodology, and effective writing and communication skills. ECU has many experienced academics able to supervise across a wide range of discipline areas.

APPLY NOW FOR AN INTEGRATED PHD
The future arrives by bike
The future arrives by bike

Feel like you are always stuck in traffic? That’s because you are.

The average commuter in Perth spends 73 hours — or almost two full working weeks — delayed in traffic each year, according to the State Government’s Economic Regulation Authority.

It’s a shocking figure, and one that highlights how damaging congestion, busy roads and endless traffic queues are for productivity.

Indeed, a separate report estimates the cost to the economy from lost productivity, fuel consumption and damage to the environment as a consequence of congestion will reach $2 billion by 2020.

And a survey from the RAC reports that nearly all respondents, over 97 per cent, believe congestion had increased over the preceding 12 months and is driving up their costs.

In contrast, Copenhagen reports approximately 36 per cent of residents in 2012 used a bike to commute to work or study, and it is pushing for a 50 per cent target. Amsterdam, Europe’s other dominant cycle city, claims cycling is used for roughly 30 per cent of all trips.

ECU Centre for Planning Program Director Tim Perkins believes there’s no reason Perth can’t ditch its addiction to cars, just as these two European cycling meccas did in the past.

“If we get all of that right, there’s no reason why we shouldn’t have a bike-friendly city in Perth.”

– Tim Perkins, ECU Centre for Planning Program Director

Add to that the forecast for Perth’s population expected to double to 4.2 million by the middle of the century, and you can see traffic queues stretching for many years into the distance.

But there’s an alternative future as well — and this one arrives on two wheels.

Cycling is booming in Western Australia, whether it’s lycra-clad MAMILs (middle-aged men in lycra) out for a roll, commuters on their way to work or people just nipping down to the shops.

The annual count of commuter bike riders in Perth, known as Super Tuesday, was up more than 30 per cent this year, in line with similar increases around the country.

At the same time, just 1.3 per cent of commuters reported riding their bike to work in Perth in the last census — a tiny proportion even when compared to Darwin, which sits close to 3 per cent. Adding in those who also use other modes of transport like train plus their bike, and we climb to about 1.6 per cent.

Perkins believes reducing vehicle speed is also important in determining how safe cyclists feel and consequently will increase participation rates.

In Paris and London speed limits are being reduced to about 30kph in the cities’ centres in an effort to reduce congestion, increase safety and encourage active transport.

“There’s a lot of research that shows as you start decreasing speeds of cars that has a major improvement in safety and the perception of safety,” he says.

The biggest problems faced by Perth, according to Perkins, is its extremely low density, the distance between where people live and where they work, and our long history of car-focussed planning policy.

However change is in the air and principles of new urbanism are beginning to creep into planning.
"It’s not good for the soul, not good for the economy, not good for the environment.”
– Brad Pettitt,
City of Fremantle Mayor

Ideally, he says, the population should live within 800m of where they work, study or shop to encourage the use of bikes, public transport and walking to get around.

The City of Fremantle is embracing the move towards a bike-friendly city with Mayor Brad Pettitt leading the charge for the port city as part of the Fremantle 2029 project.

Pettitt wants 10 to 15 per cent of trips to and around Fremantle to be made by bike, 30 per cent by public transport and the rest by car. He sees bikes as a way of decongesting the city — and eventually the rest of Perth.

“We’re seeing congestion reach that point now where it’s having a social and economic cost as well as environmental one,” Pettitt says.

“It’s not good for the soul, not good for the economy, not good for the environment.”

That extraordinary cost is starting make a strong case for decentralising the Perth CBD and other urban centres, he believes, along with greater investment in connected cycling infrastructure and quality public transport.

Both could be done at a fraction the cost of building more roads.

“That’s what’s exciting about bikes: they offer a way of decongesting our cities, making them healthier cities,” Pettitt says.

“You can build a bike lane for millions, not even tens of millions, for the same kilometre coverage that would take hundreds of millions if not billions for roads.”

While encouraging cycling through better paths and bike lanes seems straightforward, one of the biggest complaints from existing Perth cyclists is that the cycling infrastructure we have is badly designed.

The Western Australian Auditor-General has recently announced an investigation of the adequacy of Perth’s cycle path network and whether enough is being done to promote cycling as a safe and convenient mode of transport.

“The big question we need to answer now is why cyclists are choosing to ride on paths or roads in different areas.”
– Dr David Blake,
School of Natural Sciences lecturer
One part of that puzzle might be solved by a new research project from ECU, which is examining how cyclists use the current infrastructure based on data cyclists collect on mobile fitness applications.

The researchers analysed data from STRAVA, an application used by about a third of cyclists to track rides.

School of Natural Sciences lecturer Dr David Blake says the study found more than 200,000 bikes passed along Perth’s busiest cycling route on Mill Point Road in South Perth.

However cyclists were not always riding on bike paths when they were available.

“The big question we need to answer now is why cyclists are choosing to ride on paths or roads in different areas,” he says.

“This could be because of safety, convenience, speed or any number of other reasons.”

It is hoped the data will be valuable for planners as they design safer and more useable infrastructure for all road users and to identify and fill in gaps in the city’s bike network.

Natasha Hurley-Walker

Baby bumps cyclist back into a car

With a baby due in a few short months Natasha Hurley-Walker is coming to terms with the fact that it might be time to buy a car.

And even if she and her husband do decide to buy, she says it’s likely to be a temporary change until the bub is able to wear a helmet of his or her own.

Hurley-Walker has lived in Perth for 3.5 years and has never needed a car, much to the astonishment of some of her friends.

Instead her bike has been her only means of transport — and she wouldn’t have it any other way.

She racks up around 100km each week with a 14km commute each day and an outing or two at the weekend, which she says is easy, even if it sounds a lot to someone who doesn’t ride

“I guess you just pop out and do things,” she says.

“I’ll cycle to the library; there’s another kilometre. I’ll cycle to a friend’s house; there’s a couple more.

“If you asked someone how far they drive each week I think they’d probably wildly underestimate the figure, you rack up so many kilometres on small trips.”

While Hurley-Walker believes Perth’s climate and pancake-like topography make cycling the obvious choice, she thinks the city’s bike infrastructure and public transport leave a lot to be desired.

“The infrastructure here is not really joined up,” she says.

“If you go to a North American city which is pro-cycling, the busses will have racks for bicycles, the trains will have room for bicycles.

“You come here and you can only take a bike on a train between certain times.

“You can never take a bike on a bus unless you ask the driver very, very nicely and it’s quiet!”

The solution as far as she is concerned is proportional spending for cycling infrastructure.

“It’s something like 2 per cent of people who use cycling as their primary form of transport,” she says.

“Why not use 2 per cent of the transport budget on the infrastructure. It’s less than 0.5 per cent at the moment.

“Even a little bit would go a long way.”

"Baby bumps cyclist back into a car"
Getting your foot in the door

A new national strategy is supercharging the employment prospects of university students — long before graduation. Ruth Callaghan reports.

When Cyclone Lam was bearing down on Darwin earlier this year, ECU graduate Tanya Phillips was keeping one eye on the weather and the other on the production desk for ABC24.

As the storm’s trajectory shifted, she tapped out the tickertape that scrolls across the screen, keeping viewers around the country updated on warnings and advice.

Since then she’s tweeted natural disasters, keeps up a running on-screen commentary on breaking news, and summarises interviews so viewers tuning in can see what’s going on — all as part of a three-month paid internship that she secured at the end of her postgraduate broadcasting course.

It’s a busy role that can have her working past midnight from the broadcaster’s Sydney studios, Phillips says, but it’s also hugely rewarding.
A study for the Australian Council for Educational Research in 2009 that looked at the university experience of more than 30,000 students found just one in five Australian undergraduates had participated in workplace learning, such as a practicum, internship, fieldwork or clinical placement. That figure shocked some commentators, particularly as the same study estimated 63 per cent of US graduates had some kind of internship or similar experience.

In Canada, one in three students has worked as an intern or in a semester-long placement known there as a ‘co-op’ with industry.

In the UK, dozens of universities require students to take what is called a sandwich year — an entire year spent in a workplace between stints of formal study.

Australia has recently launched a national strategy designed to increase the amount of work-integrated learning in universities, with measures that include

“ABC is where I want to be long-term and I managed to score this amazing internship along the way.”

As the pressure grows on university students to demonstrate their ‘employability’ as well as grades when chasing their first jobs, the demand for internships has increased.

Nursing students still complete professional placement in hospitals, teaching students still do prac weeks in schools, but now marketing students are embedded to run social media campaigns for businesses and engineering students are tackling real-world problems on construction sites.

It’s a system that presents challenges for universities, but can also help get students get a foot inside the door.

ECU School of Business senior lecturer Dr. Denise Jackson has spent several years investigating the impact of programs that connect students with employers — sometimes described as placements or internships, but more commonly captured under the umbrella term work-integrated learning.

“The impetus has been the need to increase employer links,” she says.

“The universities are worried about their graduates getting jobs and having them as prepared as possible. The economy is worried about having a skilled labour force that is ready for work.

“When I did my degree you just assumed you would get a job at a graduate level somewhere after you finished. You can’t assume that any more.”

But with nearly 1.3 million students in Australian universities, including 890,000 undergraduates, finding ways to connect each student with industry can be difficult.
promoting participation among students and building the capacity of employers so more can engage.

The Australian Collaborative Education Network is the peak body for work-integrated learning and one of the partner organisations developing the national framework.

ACEN president Judie Kay says that while in other nations students might engage with employers externally to their course, Australia’s advantage has been that the experience is embedded in curricula.

“It is about learning occurring with authentic engagement with industry or employers,” she says.

“In other parts of the world it is just bolted on and the student can be getting something called work experience, which isn’t the same.

“One of the things Australia excels at is that we have diverse models. In other parts of the world they are more inflexible but we have a whole range of models for work-integrated learning. We also have a large amount of research in this field that underpins our practice.”

The benefits for students lie in better awareness of their future industry. Jackson says many report feeling more confident about future employment prospects, they get a rapid appreciation of what will be expected of them in the workplace, and that they enjoy the opportunity to put their studies into practice.

“We are connecting with employers and businesses, not just through placements and internships but also by bringing industry into the classroom.”

– Denise Jackson

ECU has taken the importance of flexible options on board, making it easier for employers to engage students for a period of time.

Business students can work in a placement arrangement with a business for 100 hours over semester, for example, usually a day a week over three months.

Many are eligible for a formal internship, which allows for 16 weeks of full-time work, a minimum 600 hours.

For those enrolled in a Bachelor of International Hotel and Resort Management, there is the option of a specific internship with up to 24 weeks full-time with an industry employer.

If an employer isn’t able to take a student on site — perhaps lacking someone suitably qualified to supervise during their placement — they can bring what is called a living case study to campus instead.

The business might want options for developing an advertising campaign, for example, and can pose this as a problem to students, who then work in their class environment to solve the problem and present ideas back to the employer.

The benefits for students lie in better awareness of their future industry.

“We are connecting with employers and businesses, not just through placements and internships but also by bringing industry into the classroom.”

– Denise Jackson

“The success stories I get back are growing,” she says.

“I’ve had some really heartwarming stories of graduates who come back a year later to say their internship was why they got their first job.

“We have students who have secured employment with their host organisation, and even if that isn’t the case, having a good reference from a senior manager of a big business can add a lot of weight.

“We also have students who say that their internship or placement suddenly connected theory with practice. They have struggled to envisage how the theory operates in the real world and through this process it becomes clear.”

Employers also report benefits, including advantages that come from getting the pick of good students and being able to access new thinking and new ideas. They also see positives in integrating with universities, tapping into emerging research and influencing what is taught.
Practical experience drives success

Neville Middlecoat was in the middle of his studies when he decided he needed to know more about how those lessons could be applied in the world he was looking to enter.

“I really wanted to get a foothold in the industry,” says Middlecoat, who will finish his Bachelor of Business degree midyear.

“We would hope those things would enable partnerships to be more effective and streamlined, and that will benefit students.

“We are also looking for an increase in the number of opportunities and the range of industries and employers who can get involved.”

For Tanya Phillips, the stint with ABC News24, which she won through a competitive process against other postgraduate students, has been a chance to experience the way broadcasting really works.

“Uni does prepare you well for the types of things you are doing, but until you are in a 24-hour newsroom, you can never experience the kind of intensity that is required,” she says.

“An on-the-job internship, even if it isn’t paid, is the most valuable thing you can do.”

ACEN’s Judie Kay says industry groups such as the Australian Chamber of Commerce are very interested in extending the ties with universities and students, and the national work-integrated learning strategy should assist.

“One of the things you would hope for in a few years time would be a range of mechanisms and resources that support the partnerships between industry and universities,” she says.

Middlecoat says his time with the organisation was very positive, and the staff there were happy to provide feedback and support as he developed his skills.

“Everyone was understanding and if I had any questions they were willing to help,” he says.

“It makes a big difference and gives you the confidence to learn something new and speak out, rather than just sitting back and listening.”

Neville Middlecoat was in the middle of his studies when he decided he needed to know more about how those lessons could be applied in the world he was looking to enter.

“The group was anxious to promote events to raise funds for its work as well as build awareness within the local community.

Middlecoat said that while the first event he tackled didn’t attract enough people to go ahead, his second and third efforts were successful.

“I helped organise a fundraising raffle that raised about $5000 and hosted another event with Joondalup Business Association, where we managed to get John Symond, executive chairman of the Aussie group, as the keynote speaker,” he says.

“We raised quite a bit of money from that event.”
Expanding fashion horizons

ECU Contemporary Fashion and Textiles students have been reimagining traditional dressmaking by creating inflatable garments for a show that melds fashion with art.

From left, three views of an inflatable dress by Danielle Marklew. Fashion by Joanna Ehmes, Kimberley Pace and Ryan Buckley.
The students worked with Victorian visual artist Kieran Stewart, exploring pattern-making methods by inflating the space between the body and garment and experimenting with bags, rafts and tubes. ECU Coordinator of Contemporary Fashion and Textiles Justine McKnight says the collaboration posed real challenges for students. “The workshop and the inflatable garments that followed required a lot of problem solving to work out how to blow up parts of garments on or around the body,” she says.

Student Johanna Ehmes’ work for the exhibition consisted of an asymmetric shape made of Tyvec, a high-density polyethylene material sometimes used to wrap buildings during construction. “Tyvec is a semi-industrial material with many applications in industry, aviation and safety wear,” she says. “It was a great material to work with as it can be dyed and is printable and paintable.”

The unique fashion line was part of City of Joondalup’s Urban Couture event, designed to encourage viewers to reconsider ideas about fashion and its relationship to the body.
Events

**JUNE**

**LEGALLY BLONDE**
Regal Theatre
13–20 June
Harvard’s beloved blonde takes the stage by pink storm in this fun, upbeat story of self-discovery starring 2nd and 3rd year WAAPA students.

**AUSTRALASIAN OVERTURES: MUSICAL THEATRE EDUCATORS’ ALLIANCE CONFERENCE**
WAAPA
20–23 June
This annual conference brings together musical theatre educators from around the world to share ideas about curriculum, recruitment, production and professional placement.

**JULY**

**ECU NAIDOC WEEK**
Mount Lawley Campus
3 July
NAIDOC Week is an opportunity for Australians to join together to recognise the valuable contribution Aboriginal and/or Torres Strait Islander people have made to this country.

**ART SONG ACADEMY GALA PERFORMANCE**
Government House Ballroom
5 July
The culmination of WAAPA’s second International Art Song Academy, the gala performance will feature the best singers and pianists from the Academy.

**JOONDALUP OPEN DAY**
Joondalup Campus
19 July
New courses, state-of-the-art facilities and interactive displays will be on offer when ECU once again throws open its doors for Open Day.

**AUGUST**

**MOUNT LAWLEY OPEN DAY**
Mount Lawley Campus
9 August
ECU’s Mount Lawley campus gives prospective students a chance to ask questions about courses, careers or what life’s really like at uni.

**SOUTH WEST OPEN DAY**
Bunbury Campus
23 August
ECU’s South West Campus has its ever-popular Open Day, so students and families can meet our highly qualified staff and check out world-class facilities.

**SEPTEMBER**

**SEPTEMBER GRADUATION CEREMONIES**
Perth Convention and Exhibition Centre
13 September
The University says farewell to another batch of successful graduates, with the students joining our network of more than 130,000 alumni around the world.

**ECU RESEARCH WEEK**
All ECU campuses
14–18 September
Bringing together staff, students and researchers, Research Week aims to strengthen ECU’s research culture by sharing ideas, knowledge and inspiration.

**THREE MINUTE THESIS (3MT) COMPETITION FINAL**
Joondalup Campus
15 September
The best and brightest of ECU’s Higher Degree by Research Students pitch their research to a panel of research experts.

**OCTOBER**

**ECU COMMUNITY CAMPUS DASH**
Joondalup Campus
11 October
This fun run has a range of course lengths and a family-festival atmosphere. All proceeds go towards funding groundbreaking ECU Research project.

**MACBETH**
WAAPA
9–15 October
Desire, disloyalty and murder reign in this powerful, fresh and contemporary take on Shakespeare’s Macbeth.

**NOVEMBER**

**MUSIC UNDER THE STARS**
Joondalup Campus
28 November
ECU’s flagship alumni event, Music Under the Stars, returns in 2015 after a sell-out year in 2014.
For more information on ECU events, visit www.ecu.edu.au
Making memories at the last moment

Social worker Pippa Blackburn works to preserve the legacy of her clients in their dying days, writes Sam Bold.

The fear of being forgotten is something many people experience when dying — says Pippa Blackburn — who works hard to ensure that isn’t the case.

As a Regional Palliative Care Senior Social Worker for the WA Country Health Service, Blackburn helps clients and their families preserve the ties, so they know their legacy lasts beyond their death.

“People who are dying worry about being forgotten, and the way people used to work with that issue was to cut all ties, which was considered to be ‘grieving successfully,’” she says.

“Nowadays we say the relationship continues, it just looks different.

“There are so many clients who have an impact on you. It shapes you professionally and it will enhance your skills for working with other people.”

“We help families create legacies whether it’s through tangible things like memory boxes or setting them up on a nice little holiday to create memories for their legacy.”

It is a moving and often emotional role for the former nurse and court officer, who retrained as a social worker through ECU’s South West Campus in 2002.

Now, she calls a 24,000 square kilometre patch of the South West her office.

Last year she was named Social Worker of the Year and given the Rural and Remote Practitioner Award, for her 13 years in social work here and in the UK.

While Blackburn says the award was a standout moment in her career, she credits much of her success to the Masters of Palliative Care she completed at ECU’s South West Campus in Bunbury.

She also appreciated the strong rural focus and the opportunity to work in a tight-knit community.

“The lecturers that I had were brilliant, the curriculum was great, and I think the availability of the lecturers really helped in terms of mentoring,” she says.

“There are so many clients who have an impact on you. It shapes you professionally and it will enhance your skills for working with other people.”

As a social worker, Blackburn says she has discovered the importance of looking for the lessons that others can teach you even in moments of tragedy — whether it’s a child’s courage or a mother’s strength.

Even in the midst of dying, there is a kind of beauty and worth that can be found.

She tells the story of one client that illustrates how important palliative care and the creation of special moments can be.

Her client wanted to renew his wedding vows to his dying wife, creating a final memory that he could treasure.

“We scoured the town for her favourite flowers and sourced their favourite song,” she told ECU graduates at a recent ceremony.

“Surrounded by family, he renewed his vows to her.

“Although she was not responsive or conscious, she had a tear roll down her cheek and died several hours later surrounded by the love of her family.”

It’s a powerful moment, Blackburn says, that the family will never forget.

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
Should your toddler use a touchscreen?

It is time to stop badgering parents who let children use smart phones and tablets, says Professor Lelia Green, who is investigating attitudes and practices around the use of the internet by very young children.

What are the risks in letting very young children play with touchscreens? Sometimes these are virtually babes in arms who can't even walk, or talk. But they gurgle in delight when they get their chance to click and swipe. If we are to believe the more conservative elements in the medical profession, parents are abandoning their duties if they allow kids 'screen time' before their second birthday.

So which experts should we trust? Here at Edith Cowan University, a group of communications researchers believe that parents are the real experts in toddlers' use of screen technologies. Mums and dads compare notes, they watch how others handle the challenges, and they discuss which apps are best for their pre-schoolers' sound and word recognition.

So why not investigate that everyday knowledge and practice rather than imposing a big "you should" from an expert?

Babies and toddlers are the youngest members of a very digital society. All around them they see people focused on fun or pleasurable, engaging or alarming communication. They see that digital technologies are used in everyday family life and they want to be included in everything that's going on.

Programmers and app developers are well aware that happy children make a parent's life much easier, and there is a growing choice of child-friendly materials, which are clearly targeted to engage young children and reassure parents that useful skills are being learnt.

Despite the overabundance of apps for toddlers a built-in 'guilt-o-meter' stops parents from relying too much on technology to tame their toddlers — and the parent sharing the technology usually wants their phone back. But if you look around, it's possible to see parents and children, heads bent together, enjoying a shared moment of digital communication.

Children are learning that technologies can keep bonds strong, even when distance makes connection difficult.

We call it co-present interactivity, and it is something special that doesn't seem to have been considered in the paediatricians' ban on screen time. Maybe they haven't had the chance to watch, as we have done, a crawling baby scoot across the room to the sound of the Skype ringtone, desperate to see Dad speaking to him from a mine site hundreds of kilometres away.

That same child will chat happily away to a grandparent in another country and to a much-loved aunt in a different city. Like grownups, children are learning that technologies can keep bonds strong, even when distance makes connection difficult.

It is too soon to know what the implications of digital engagement are for young brains.

Some people worry that toddlers who focus on digital communication may take longer to speak well or learn to listen. These are the same arguments that people used when television first came in.

But these children are growing up in a world where it's good to be literate in all these different forms of communication. Maybe the best way to learn to be a teenager in the 2020s is to be a touchscreen toddler today. Either way, it's time to stop making parents feel guilty and time to take seriously the knowledge parents have. More than any other group of people, they know the costs and benefits of sharing personal technologies with toddlers.

At Edith Cowan University, the "Toddlers and Tablets" research team look forward to finding out what parents do, why they do it and what they wish they'd known the first time their baby reached for a phone and said "wahhh".

Professor Lelia Green and Dr Donell Holloway from the School of Communications and Arts have received an Australian Research Council Discovery Project grant and will work with Professor Sonia Livingstone (London School of Economics) and Dr Brian O'Neill (Dublin Institute of Technology) to examine family practices and attitudes around very young children's internet use in Australia and the United Kingdom.