Building it better: a world of equity, possibilities and promise
Welcome to UnCover, the magazine for all members of the University of Canberra and our wider Canberra community.

We’d love to hear your story ideas, feedback and thoughts. Contact us via stories@canberra.edu.au

For a digital version of this magazine visit www.canberra.edu.au/uncover/magazine

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The University of Canberra acknowledges the Ngunnawal people, traditional custodians of the lands where Bruce Campus is situated. We wish to acknowledge and respect their continuing culture and the contribution they make to the life of Canberra and the region. We also acknowledge all other First Nations Peoples on whose lands we gather.
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WELCOME TO THE 2022 EDITION OF UNCOVER MAGAZINE

PROFESSOR PADDY NIXON
VICE-CHANCELLOR AND PRESIDENT
UNIVERSITY OF CANBERRA
The new year signals a new beginning, as well as a time to reflect on events and achievements of the year gone by.

The last few years have been like none we’ve ever seen before – but amid great upheavals, and in the face of new and unrelenting challenges – spirit, learning, creativity and innovation have shone all the brighter.

And as we mark 31 years of the University of Canberra going from strength to strength, there has also been a lot to celebrate.

In 2021, we unveiled a very ambitious Campus Master Plan – our blueprint for the next 20 years, embracing the concept of ‘The Educated Life’ – and became the first Australian university to have a Sport Strategy in place.

UC rose 20 places in the 2022 QS World University Rankings, remaining in the top two per cent of universities globally.

We were ranked No. 2 in the country and No. 16 in the world, in the Times Higher Education (THE) Young University Rankings.

And, pleasingly, the University of Canberra was named first in the world for reducing inequalities, in the 2021 THE Impact Rankings.

This is all, quite simply, incredible – even more so when you consider the timeline in which it all happened. All credit goes to our tightly-knit community of students, teachers, researchers, professional staff, alumni and generous supporters.

These endeavours and accolades also reflect where UC is right now – in a time of dynamic growth, of building and forging, looking for and finding ways to do it all better.

The road to a better world isn’t one we can just embark on – it is a road that we have to build, for these and future generations.

This edition of UnCover magazine exemplifies how so many in our UC community are coming together to construct pathways that lead to greater equity, collaboration, progress.

One of my personal highlights of last year was the launch of UC’s Stretch Reconciliation Action Plan (RAP) 2021–2024. It’s all about Indigenous and non-Indigenous people walking the path to Reconciliation together – strengthening relationships with local Ngunnawal peoples, creating relevant cultural policies, and increasing Aboriginal and Torres Strait Islander employment outcomes at UC are just a few key targets.

In another feature, you’ll read about Professor Dianne Gleeson, Dr Alejandro Trujillo-Gonzalez, Dr Elise Furlan and their team under the EcoDNA research group. Their work with environmental DNA, or eDNA, represents cutting edge, collaborative research with a huge impact on both conservation and biosecurity – but also with remarkable potential for citizen science.

Launched last year, the Climate Change Adaptation and Resilience Research Network (CCARRN) is a multi-disciplinary network of researchers led by Professor Barbara Norman. It’s focused on supporting communities to deal with climate change, while the researchers look at developing strategies for resilience and adaptation to the impacts of climate change, they’re also simultaneously looking at plans for the mitigation of those impacts.

Equally inspirational is how our creative arts therapy project led by Ian Drayton is engaging with trauma survivors suffering from Post-Traumatic Stress Disorder (PTSD), and how Dr Michael Davies is working to equip pre-service teachers to have those difficult conversations about consent with their students.

We also chat to two UC experts, Associate Professor Dr Abu Barkat Ullah and Dr John Hawkins, as they weigh in on a topic both contemporary and future-focused, and look at the various aspects of cryptocurrency – its potential, and its potential pitfalls.

As always, we celebrate our students and alumni, including those like the inspirational Sarah Walsh, Alasdair Tutt and Ben Sutton, who are all playing very important – albeit very different – roles in making sport more accessible and inclusive.

You’ll read about PhD student and farmer Vince Heffernan – who hopes his research will help him influence policy and support other farmers to take up regenerative farming practices – and witness the dreams and realities of a more gender-equal world from a group of inspiring students.

Julie Ditrich is making her mark as the first Australian woman to write for The Phantom comics; CEO of Relationship Matters Janet Jukes OAM has spent her life working for social justice; trail blazing Olivia Thornton is Cricket ACT’s first-ever female CEO, and Craig Cormick OAM talks about his work as one of Australia’s leading science communicators and an award-winning author.

These pages are filled with remarkable people, and their equally remarkable stories.

Here’s wishing us all a wonderful – and meaningful – 2022.
BLAZING A TRAIL IN INK

Last year, University of Canberra alumna Julie Ditrich became the first Australian woman to officially write for *The Phantom* comics – she talks about breaking into a male-dominated industry, and the ongoing growth of diversity within it.

STORY: DANIELLE MEDDEMMEN
PHOTOGRAPHY: SUPPLIED
ARTWORKS: WENDELL CAVALCANTI, *THE PHANTOM: ADVENTURE OF THE DRAGON’S LEG*
       PETER FAIRFAX, *THE LAKE*, PUBLISHED IN AUSTRALIA
MUST keep moving towards those lights. MUST stay warm. MUST stay alert.

KEEP GOING. KEEP GOING. JUST KEEP GOING.
After studying for a Bachelor of Professional Writing at UC, Julie made a name for herself in the comics industry and hit a career highlight in early 2021, when she was asked to write the adventures of the 21st Phantom.

“The owners of Frew Publications, which holds the Australian publishing license for *The Phantom*, were specifically looking to expand the audience and readership,” Julie says.

“It had previously been mostly 35+ men, and they wanted to attract a new generation of readers.”

Not only has Julie excelled in her own right within the industry, but she has also put in the hard yards to pave the way for other writers to succeed.

In 2016, Julie launched her own business, Comics Mastermind, a professional development service to act as a resource for the next generation of comics writers.

On top of this, and building on work carried out by the Australian Society of Authors Comics/Graphic Novels Portfolio, Julie organised a survey to determine the demographic of the Australian comics community, and identify areas for development.

“The initial survey in 2009 found that 87 per cent of comic writers were male, as opposed to 15 per cent of women,” she says.

“By 2015, when I had independently conducted another survey to see if there was any other movement, I found that Australian women comics writers had expanded to 20 per cent.”

The survey also had comics writers identify areas for improvement, and Julie facilitated a personal development event featuring international graphic novelist Colleen Doran, with participants booking in from all over Australia and internationally.

Julie says she is pleased to see that both the audience and the comics workforce has diversified since she entered the industry.

“When I entered the Australian comics community, it was male-dominated, and I was one of a handful of women. If you attended the early conventions, there were few women writers or convention visitors,” she says.

“I think a lot of women and non-binary people have now been drawn to comics and the industry because it’s a flexible and versatile medium – and while I’m no expert on this, I think that previously it was only known for the superhero genre, whereas genres like slice of life are becoming more appealing to readers.”

Julie’s first work for *The Phantom* series, *The Adventure of the Dragon’s Leg*, was published in 2021; a second series called *The Return of the Golden Circle* will be published in 2022.

While she is also busy writing short prose stories, Julie has some advice for budding authors.

“I heard a great piece of publishing advice which was ‘don’t silo yourself’. You’re not doing yourself any favours because if one source of writing income dries up, you’ve got nothing else,” she says.

“I think it’s also really important to explore your potential in several genres and mediums.”

UC alumna Julie Ditrich has been a true trailblazer for women in the Australian comics industry. ▲

Extract from *The Lake*, script by Julie Ditrich, art by Peter Fairfax. ▼
Creative arts therapy is a wonderful healing tool, and Ian Drayton is harnessing it to help those impacted by trauma, from Defence veterans suffering from PTSD to bushfire-affected communities.

Content warning: This article discusses various forms of trauma and Post-Traumatic Stress Disorder.

The benefits of the creative arts – and creative arts therapy for trauma survivors – have been shown time and again, as a positive mechanism to assist in the area of mental health, especially in terms of Post-Traumatic Stress Disorder (PTSD), Traumatic Brain Injury (TBI), and other psychosocial disorders.

Inspired by his own time in the Royal Australian Army, the University of Canberra’s Deputy Director, Innovation and Business Development, Ian Drayton has been working in partnership with the Department of Defence since 2015 to deliver creative arts recovery programs for Defence personnel.

Participants are all current serving Defence and emergency services personnel who have been wounded, injured or become ill while in service.

“We deliver arts programs for recovery, resilience, teamwork, and skills,” Ian says.

“There are three creative mediums run as part of the programs – creative writing, visual arts, or music and performance.”

Each participant is able to experience a taste of all three mediums, before choosing which one they’d like to participate in and learn about in the longer term.

Programs are run out of UC’s Inspire Centre, in the form of a four-week intensive, run twice annually.

Ian’s creative art recovery programs are run through the Faculty of Arts and Design, are tailored to injured Defence personnel, and have seen great success over the past seven years.

“We’ve put over 300 currently serving Defence and emergency services personnel through the program since it started – and there are so many examples of people who have said to us that they’re only alive because of the program,” Ian says.

“The social imperative of arts work in this area is founded on current statistics that between 18 and 30 per cent of those returning from war zones can be expected to suffer mental health issues, which can lead to family breakdowns, homelessness and other social problems.”

“So for me, if we’ve been able to save one life, it’s been well worth the efforts of our fantastic mentors.”

Recent United States-based neuroscience research has found visual imagery referencing community, purpose, and belonging was associated with improved function in military service members with brain injuries and PTSD. The results are measured using Magnetic Resonance Imaging (MRI) technologies.

International research shows that creative activity helps participants safely express and non-verbally externalise inner psychological experiences, especially fragmented memories resulting from...
“In all of our programs, we’ve seen some absolutely fantastic artwork – some of it is just amazing ... but in the end, it’s not about the art at all.”

trauma, as well as the identity-related, emotional struggles of physical and cognitive injuries sustained in service,” Ian says.

Ian’s programs have now expanded beyond the Defence Force and into regional Australia.

Following the devastating bushfires across Australia in 2019 and 2020, Ian joined a team of experts, celebrities, and artists to create a program called Regeneration, which travelled to affected communities to provide creative arts programs and support.

“The programs we’ve offered as part of Regeneration differ slightly from what we’ve been offering to Defence personnel,” Ian says.

“We’ve developed a trauma-informed framework, and we provide training to the local artists in the community in that framework. So that instead of just going into these small towns, running a program, and then leaving, the artists are equipped to continue delivering the program according to that framework, and can support their communities into the future.”

Ian says this method will ensure their work can benefit communities long into the future.

“Essentially, as well as providing practical art skills, the artists should also be able to identify people suffering from the effects of trauma and work with individuals to seek professional, clinical care,” he says.

For participants, the program not only provides art lessons, but coping and support mechanisms.

“In all of our programs, we’ve seen some absolutely fantastic artwork – some of it is just amazing ... but in the end, it’s not about the art at all,” Ian says.

“It’s not about the end result – it’s about the process. So people can draw stick figures if that’s what they want to do, or they can just dabble in short poems instead of an essay – if they can come along and build a connection, then that’s fantastic.”

Eventually, Ian would love to use the trauma-informed framework to enable artists across Australia, not just in bushfire-affected communities, to create community connections and help those in need.

“Our goal now is to build these networks of creative artists around the country, using the framework,” he says.

“I know this concept could definitely evolve and provide connections for local communities with their primary health networks and other support providers.

“The ongoing COVID-19 pandemic has highlighted the importance of maintaining our mental health through social connections and interactions with others. I believe we’ll see a sharp rise in demand for mental health services across the country – it would be wonderful to see the arts taking a more central role in assisting that recovery.”

If this story has raised any concerns for you or someone you know, you can contact Lifeline on 13 11 14, or Beyond Blue on 1300 22 4636.
The EcoDNA research group at the University of Canberra is using environmental DNA to provide Australia’s biosecurity measures with a huge boost, and transform national and international conservation efforts.
eDNA analysis techniques are providing a new, accurate and fast method to help stop pests entering Australia before they wreak havoc on native flora and fauna, and agricultural produce.

“If the khapra beetle, which is second on Australia’s National Priority Plant Pest list, became established here, we could be looking at an economic cost of $15 to $20 billion over the next 10 years,” says Dr Alejandro Trujillo-González, Senior Research Fellow at the University of Canberra’s Faculty of Science and Technology.

Luckily, Australia has so far remained free of serious khapra beetle infestations – Alejandro and his colleagues in the EcoDNA research group are working to make sure that remains the case.

Formed in 2013 by Professor Dianne Gleeson in partnership with the Centre for Invasive Species Solutions (formerly Invasive Animals CRC), the team is one of the longest-standing environmental DNA – eDNA – research groups in the country. Within its ranks is Dr Elise Furlan, one of the first Australian researchers to develop eDNA analysis techniques.

Elise was instrumental in the creation of eDNA facilities at UC, which have enabled high-sensitivity eDNA detection while minimising contamination.

Dianne and Elise pioneered how eDNA is used in Australia, setting standards for how, when and why eDNA can improve surveillance of rare, protected and invasive species.

Their research in and constant improvement of eDNA techniques defined how the EcoDNA group explores the use of eDNA in biosecurity and environmental surveillance, banking on the techniques to boost detection methods, and ensure that potential unwelcome visitors are found and dealt with quickly.

“We have to prioritise the fact that there are so many unique native species of flora and fauna here in Australia, which need to be protected from invasive species.”
“Because of our geographical isolation, Australia and New Zealand are unique – many of the pests which circulate globally have only a few pathways to reach us, and haven’t yet established themselves here,” Alejandro says.

That’s not to say they can’t – late 2020 saw khapra beetles detected in isolated cases in Canberra. Fortunately, the Department of Agriculture, Water and the Environment quickly sparked a bug hunt that tracked and wiped those creatures out.

“It’s so important to be proactive and develop effective methods for early detection – the earlier a biosecurity response is triggered, the more effective it is,” Alejandro says.

“We have to prioritise the fact that there are so many unique native species of flora and fauna here in Australia, which need to be protected from invasive species.”

He adds that eDNA is not a silver bullet – but is a very sensitive detection method which is complementary to other biosecurity applications.

Traditionally, pests which may hitch a ride in shipping containers and the like, have been detected via visual inspections – it’s imperative that these measures are modernised.

“The Australian Government agrees – last year, Minister for Agriculture and Northern Australia David Littleproud announced a $7 million investment in the National eDNA Testing Program.

“This funding is largely due to the extensive work from the EcoDNA group, and we are looking forward to working on various projects under the program,” says Dianne, now the Associate Dean, Research and Innovation, at UC’s Faculty of Science and Technology.

With the eDNA testing for khapra beetles proving successful, a $1.4 million funding grant was also recently awarded for the Hitchhiker eDNA Project, led by Alejandro.

“We are currently testing dust samples collected from shipping containers in Brisbane, for exotic invasive ants, brown marmorated stinkbugs, and describing insect diversity common in shipping containers to inform government of other pests,” he says.

In addition to helping biosecurity measures leap light years ahead, eDNA tools are also changing the face of wildlife monitoring and conservation efforts.

A plethora of projects within the EcoDNA group illuminates the possibilities – PhD candidate Jack Rojahn developed molecular techniques to monitor the post-release survival of the endangered northern corroboree frog, and Research Officer Sumaiya Quasim designed the automation of large-scale predator detection from trace eDNA.

Research Fellow Dr Doug Beattie is contributing to an international collaboration to ensure the Asian black-spined toad doesn’t become a cane toad-style menace, and is also running assessments of the feral pig eradication program on Kangaroo Island, to check population levels before and after culling operations.

At the heart of this science – the knowledge that all life leaves a trace, even if you can’t see it.
EXPLORING THE TRACES
LIFE LEAVES BEHIND

eDNA research is based on analysing DNA – deoxyribonucleic acid – the genetic building blocks of nearly all living organisms.

As an organism progresses through its life on the planet, it leaves minute legacies like skin cells, mucus, fur and faeces behind in the soil, water, even the air itself – these are the sources of eDNA.

The use of eDNA-based detection relies on environmental sampling to determine the presence of particular species, or to get a snapshot of all the species in a particular place.

A Polymerase Chain Reaction (PCR) approach can be used to multiply the DNA in a sample for single species detection – this can be used to monitor rare or invasive species, assess the effectiveness of species reintroduction to the wild, or check if a species is breeding.

For multi-species detection, high throughput sequencing methods like metabarcoding allow for DNA from multiple species to be detected. This lends itself both to biodiversity monitoring for conservation, and surveillance for biosecurity – for instance, detecting smuggled ornamental fish or pathogens they might carry, just by testing a water sample.

Former EcoDNA team-member Dr David Njoroge Thuo – who graduated from UC with a PhD in 2021 – used this technique to analyse the faecal samples of cheetahs on Kenya’s Maasai Mara National Reserve – and helped show local farmers that the cheetahs weren’t the main culprits preying on their livestock, so they didn’t need to kill them.

“eDNA techniques are non-invasive, so there is no need to capture any species or disturb a particular environment,” says Dianne.

For both biosecurity and wildlife monitoring practices, eDNA provides a surveillance pathway which hits all the right notes – greater sensitivity and accuracy of results, lower costs and less manpower needed.

What DNA can’t tell you though, is whether an animal is dead or alive – that’s where RNA comes in.

Short for ribonucleic acid, RNA is part of active cellular activity, and so is only shed by live animals.

“DNA in the environment can remain detectable for weeks, even months, whereas RNA degrades quickly in comparison – so while the former will signal a historic presence, RNA is indicative of active or recent presence,” Alejandro says.

With eDNA techniques still in their comparative infancy, the EcoDNA group is looking to consistently improve methods, refine results, and push boundaries.

“This research field is only about 10 years old and we are still learning our limitations – and pushing them,” Alejandro says.

“It’s as important to know where it does not work – eDNA techniques work really well with fish, insects and microorganisms, but reptiles don’t shed DNA in the same way other organisms do, and so we have to find new techniques to address that.”
THE EGGALITARIAN NATURE OF eDNA

The EcoDNA group is all about sharing – they’re a highly collaborative bunch.

“One of our newest projects has us working with researchers from Australia and New Zealand to develop the baseline eDNA protocols, guidelines and standards,” says Alejandro.

These not only include guides for the creation of eDNA assays, but the validation standards that someone can use to evaluate them – underlying the EcoDNA group’s ethos is the desire to make eDNA tech accessible to end-users, and expand it from the lab out into the real world.

“If you have many different end-users, you must have baseline standards to give meaning to the results,” Alejandro says.

This is a crucial aspect of his biosecurity work, as the eDNA technology developed is to be used in real time, in the field, by biosecurity agents.

“We have developed portable tools for field use, so that samples can be tested there and then to detect and identify species – they return a result for khapra beetles within just 45 minutes, and results for fish in 35 minutes,” he says.

“We have also developed training methods for the use of the tools – because it is when eDNA is used with understanding, that it really shines.”

Nonetheless, it is this relative simplicity that makes eDNA a champion of citizen scientists.

The EcoDNA team has a long history of innovating and testing technologies that could one day bring eDNA to your own home.

Since its early beginnings, EcoDNA and the Centre for Invasive Species Solutions have strived to improve surveillance and the simplicity of eDNA methods, without compromising rigour. This can be seen in the case of their early work detecting the last remaining highly invasive carp in Tasmania.

“Working with eDNA techniques means that we get to wield innovative, cutting-edge scientific tools to make a difference in the world – and it’s such a cool technology, making science accessible, empowering and bringing it to life for the wider community,” Dianne says.

Looking to the future, the EcoDNA group is already growing, and its projects, multiplying.

“We are already collaborating with the NSW Department of Primary Industries, developing eDNA methods for biodiversity monitoring to underpin their water sharing plans, as well as developing detection methods for crocodiles and cassowaries in Far North Queensland, and working in the Pacific region to assess apex predators, their microbiome and how it’s influenced by climate change,” Dianne says.

Looking to the future, she predicts that eDNA will be used in much mainstream research.

“It’s already being used for the surge testing of sewage systems for SARS-CoV-2 and its variants,” she says. “I think it’s also going to become integrated with a lot more data, and will be able to provide us with even more information – the ability to tell between individuals, rather than just between species.

“Finally, I think the technology itself will become more autonomous – imagine deploying a drone and running an assay to sample and conduct analysis while it’s still in the air.”

Lab technician Maddy Johnson-Woodhouse is another member of the EcoDNA team, pushing the boundaries of how eDNA can be applied in the field.

This research field is only about 10 years old and we are still learning our limitations – and pushing them.

“"
BUILDING CLIMATE RESILIENCE FOR THE FUTURE

Experts from the University of Canberra’s Climate Change Adaptation and Resilience Research Network are helping and supporting communities to adapt to the impacts of climate change.

STORY: CHRISTINA KING
PHOTOGRAPHY: TYLER CHERRY, DAVID FLANNERY, GININDERRY/ADAM MCGRATH, AND SOURCED
Climate change is a *hot* topic – in every sense of the word.

Australia’s hottest year on record was 2019, culminating in catastrophic bushfires which ripped across much of the country.

In the wake of this devastation, a multidisciplinary network of researchers, community representatives and experts on climate change adaptation were brought together at the University of Canberra to discuss what could be done.

The Climate Change Adaptation and Resilience Research Network (CCARRN) was officially launched in mid-2021 to support communities – both locally and further afield – in developing effective resilience strategies and sustainable solutions to recover from and adapt to the impacts of climate change.

The University of Canberra’s Professor Barbara Norman is Chair of CCARRN and describes it as “a soft web to better connect us all, and to be a conduit for greater collaboration, partnerships, and to present the whole range of work across the university in a coherent way.”

Australia’s hottest year on record was 2019, culminating in catastrophic bushfires which ripped across much of the country.
The work to reduce greenhouse gas emissions must be done immediately.

CCARRN’s projects and research areas focus on climate change adaptation. However, it is the network’s integrated approach to strategy development which makes it unique. This sees adaptation and resilience plans created alongside mitigation strategies to reduce greenhouse gas emissions as part of every solution the network develops.

“It’s not an either/or question anymore,” says Barbara, of the mitigation versus adaptation idea.

“That’s an old way of framing it. Yes, [CCARRN] is focusing on the adaptation and resilience, but I always make very clear that anything you do in adaptation must include reduction of emissions. So don’t build a seawall out of concrete, for instance. Nature based solutions are now leading practice.”

“It is now recognised that some significant climate impacts are already locked in. So we need to be working with communities, particularly in this country, on how we minimise risks to coastal communities, to bushfire-prone areas, to areas subjected to intense heat, prolonged drought and extreme events.

“The projections by our national science organisations are all very consistent, that these trends will only increase in intensity. So, working with local communities to create resilience plans and climate adaptation strategies is really CCARRN’s commitment.”

CCARRN’s work: Diverse and impactful

To keep this commitment, CCARRN ensures its research and projects are as diverse and practical as they are impactful, with ventures ranging from crafting sustainability frameworks and engaging in education around climate change, to dealing with heritage and conservation issues, recovery from disaster work with affected communities, and research into energy usage, waste management, and more.

With further effects of climate change so imminent – and so likely to affect communities right across Australia in the not-so-distant future – the importance of CCARRN’s work is apparent.

The announcement by the Federal Government in late October 2021, that Australia would reach net-zero carbon emissions by 2050, brings to light the need for immediate change in relation to how Australian businesses and industries operate with regard to greenhouse gas emissions.

COP26 in November 2021 saw many countries from across the globe commit or recommit to similar targets, including the targets for the not-so-distant future, with the Australian Government having committed to reducing its emissions 26–28 per cent below 2005 levels by 2030. Countries have been requested to report back to COP27 in Egypt in 2022, with ‘strengthened targets’ to limit temperature rise to 1.5°C.

“The discussion now is more about the target for 2030,” says Barbara. “For zero emissions by 2050, you can’t start acting on that in 2045. What you’re doing this decade will actually determine whether you get to net zero – what we do in the next ten years is critical.”

But achieving such a dramatic decline in emissions won’t be easy.

“The longer you leave it, the harder the change is going to be,” she says. “The sooner you act, the better.”
Climate change education and training

“What struck me since bringing this initiative together is that we need to be training the future generations,” says Barbara.

At the moment, this training involves utilising existing courses and units at the University of Canberra, to promote education around sustainability and climate change issues.

One such unit is Climate Change & Sustainable Business Futures, offered at UC’s Canberra Business School. The unit provides students with an understanding of climate change science and policy, and the development of sustainable futures for business, both in Australia and internationally.

“This unit has proven to be consistently popular with students,” says Assistant Professor in Business Brian Weir, who is the unit convenor.

“It provides a single-semester primer on climate change and business, covering basic climate science, current policy and initiatives, and relating these to Australian business.”

Students explore business issues and dilemmas related to climate change, and try to consider possible pathways towards improved sustainability in the future.

“A particular focus is on Canberra and the surrounding region,” Brian adds. “This sees students considering climate change and sustainability in terms of the agriculture, tourism and other business sectors.”

And climate change education goes beyond the university too.

“We need to build capacity across the collegiate as well,” says Barbara. “We see an opportunity out in the community. Local government councillors, for example, are elected from all walks of life and can have little detailed understanding of climate change.”

The network runs community events, such as the inaugural A Local Conversation webinar, organised with the Canberra Region Joint Organisation (CRJO) and Canberra Urban and Regional Futures (CURF), and held in conjunction with the COP26 international climate change summit in November 2021.

The event saw speakers and local leaders join together to discuss their experiences and aspirations for adapting to climate change across the Canberra region.

Along with other such events, this works not only as a conversation starter but also as an educational conduit to raise general awareness and understanding of the issues of climate change and sustainable futures.

Ginninderry: a local sustainability framework

This project is a Ginninderry/University of Canberra partnership with the Centre for Creative and Cultural Research, and Barbara describes it as “a local innovative development that’s happening on the urban edge of Canberra.”

The Ginninderry site, which sits along the Murrumbidgee River Conservation Corridor, will see the area become home to 30,000 people residing in approximately 11,500 houses over the next 40 years.

The project involves research to better understand liveability and sustainability indicators in the Ginninderry region such as energy consumption, land use, transport, use of public space, safety, health and wellbeing.

CCARRN works with the development site to ensure excellent liveability and high quality of life for those living in the Ginninderry development, while simultaneously designing a model of sustainable community living and creating opportunities for long-term research into “master-planned” communities, to understand best practice for future planning.

Bushfire recovery and wellbeing

This large-scale research project involves a survey into recovery, health and wellbeing in the wake of the 2019–2020 bushfire disaster. Funded by the Medical Research Future Fund (MRFF), it is concerned with the mental health and wellbeing of communities affected by the bushfires in southern NSW and the ACT, and aims to design a response to assist affected communities in building resilience and recovering from trauma.
BRIGHT SPOTS IN THE FUTURE

“The good news is that, globally, the shift [towards net zero emissions] is on, and has been for some time,” Barbara says.

“And the very good news is that industry is leading. The banks, the insurance companies, the investors, the Reserve Bank: everybody is singing the same tune.”

She also explains that businesses are recognising that sustainable and net zero-emissions solutions are the future and, as a result, are moving towards investing financially in “sensible business propositions” which address issues connected to carbon emission reduction and sustainable futures.

“The other bright spot is that the big professional bodies like Engineers Australia, the Planning Institute of Australia, plus architects, landscape architects, and the construction industry have embraced this agenda and are starting to run training programs through their memberships,” Barbara adds.

“That affects thousands of people across Australia, many of whom are in everyday decision-making positions. I think they can make a very substantial difference, if we build that training and capacity.”

Governments too are getting on board. The ACT actually has legislated emissions targets, which Barbara describes as “really leading edge”.

“I’m a great supporter of clear targets,” she says. “They focus everyone’s minds and become shared objectives.”

“But they’re going to be tough – 50 to 60 per cent by 2025. And 100 per cent by 2045.”

And it’s not just up to governments and professional bodies – every person can contribute on an individual scale too.

“Be mindful of your everyday activity,” Barbara suggests. She also recommends considering how we use transport, as well as our individual and household use of energy, water and our recycling practices.

“Consumption is the biggest issue in Canberra though – so, shopping and buying new things,” she adds.

“Considering how we consume and how we manage waste are probably our biggest challenges.”

Climate change adaptation, resilience and mitigation are complex and multifaceted issues. There is still much to be done, more change to make, and further research and difficult conversations to have.

But the integrated, multidisciplinary work of networks like CCARRN will go a long way towards making meaningful and substantial contributions to positive change as we move towards a future with altered climatic conditions and – hopefully – net-zero emissions.
Leading science communicator, author and University of Canberra alumnus Dr Craig Cormick OAM talks about life driven by curiosity, and the importance of empathy and compassion in communication.

“... most people will be willing to engage with you, if you are honest about where you want to go.”

From morning hours spent writing a children’s book, then working on a research project into communities recovering from the impacts of the Black Summer bushfires of 2019-2020 and the COVID-19 pandemic, to a late-night teleconference with colleagues at the Nobel Prize-winning Organisation for the Prohibition of Chemical Weapons (OPCW) in the Hague – a typical day for Dr Craig Cormick OAM isn’t typical at all.

A three-time alumnus of the University of Canberra – attaining a Bachelor of Arts in Professional Writing in 1984, a Graduate Diploma in Communication in 1990, and a Master of Arts in Communication, 1999 – Craig is both a prolific, award-winning author who fearlessly crosses genres, and a leading science communicator.

Sometimes, he is both at once – such as when he wrote *The Science of Communicating Science: The Ultimate Guide*, published by CSIRO.

“I put my life’s learnings and teachings into the book as a legacy project – the idea was to take all the complex research done on science communication and present it in a fun and easy-to-digest format,” he says.

“One career path wouldn’t satisfy all my creative drives – and rather than changing careers every five years, I’d rather pursue all my passions concurrently.”
Craig’s work has taken him across seven continents – including Antarctica, when he received the Antarctic Arts Fellowship in 2008, and travelled to all three of Australia’s continental Antarctic stations. In 2006, Craig was the writer-in-residence at the Universiti Sains Malaysia (University of Science Malaysia) in Penang, Malaysia.

His favourite place to visit though, is Africa.

“On one visit in 2019, I ran a workshop on science communication for agricultural biotechnology in Mombasa, Kenya, with participants from right across the continent,” he says. “I couldn’t believe I was being paid to be having such a good time with such lovely people!”

Craig has worked for government agencies including CSIRO and Questacon, and was President of the Australian Science Communicators (2016-18) and Chair of the National Youth Science Forum (2013-2014).

More recently, he has been a voluntary adviser on education and outreach for the OPCW.

But the best job he’s ever had?

“Cruise ship lecturer, in 2018 to 2020. I took my wife and young son with me, and we went around Australia, across the North Atlantic – visiting Iceland and Greenland, and also South America and Antarctica,” he says.

In addition to author and science communicator, Craig wears a third hat: that of a carer.

“My work as a carer involves several family members with quite a range and complexity of disabilities,” he says. Inspired by this, he also works with the Governance Group for the ACT Carers Strategy, working to ensure that the needs of carers are met across the community.

These different strands of his life are forged together by Craig’s constantly-simmering curiosity and fierce sense of empathy – which also thread through all his writing.

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“Many of my books include Indigenous, gay, multicultural stories and themes, circling those whose stories have been left out of history,” he says.

Craig wants to put them right back in. His books like Unwritten Histories – named ACT Book of the Year in 1999 – shine a light on the unrecorded contributions of Indigenous Australians. He has published over 30 books of fiction and non-fiction – several of them winning awards.

“I am most proud of my most recent book, On A Barbarous Coast, which was co-written with Indigenous author Harold Ludwick,” he says.

“We imagine what might have happened had Captain Cook’s Endeavour sunk when it hit the Great Barrier Reef in 1770 – and the survivors had to struggle ashore and try and survive in an unknown land, reimagining how our history might have been.”

Books aside, empathy is also a crucial trait in science communication and research, Craig says.

“A lot of work I do in science communication goes under the radar – like studying how the needs of people with disabilities, and people from non-English speaking backgrounds, in the face of natural disasters, are met,” he says. In that case, being able to walk in someone else’s shoes is the starting point for his work.

Many of the subjects he writes about, or presents at workshops and conferences, are also those that generate heated arguments – even rage – as often as they do reasoned debate: climate change, embryonic stem cells and genetic modification technologies, among them.

In which case, empathy is the compass that can help navigate these potentially choppy seas.

“Science communication isn’t just about conveying facts – not if you want to do it effectively,” says Craig. “As a science communicator, you have to know about more than just how scientists work – you have to understand how the layperson thinks.”

“You have to talk emotion – it’s not about trying to convince people of facts, it’s about looking to understand where they are coming from, engaging with them and finding a way to work with their values.”

Much of Craig’s science communication career has been focused on issues of how people think, and why they accept or reject certain types of information and technologies.

“It can be as simple as having a conversation, and really listening to find out what lies behind their approach or attitude – often, it’s fear,” he says. “Just remember that most people will be willing to engage with you, if you are honest about where you want to go.”

“Don’t just talk to your followers. It’s the groups that don’t agree with you that you need to talk to – always with respect and engagement.”

Craig with some of the over 30 books he has written – both fiction and non-fiction, several have gone on to win awards.
Farmer Vince Heffernan is a passionate proponent of regenerative farming – and is hoping that his PhD study at the University of Canberra will help him to influence policy and support other farmers to give back to the land.

Decades in the construction, real estate and advertising industries gave Vince Heffernan valuable opportunities and experiences – but it was his roots on the family farm that seeded his life’s calling as an advocate and proponent of regenerative farming, and drew him back to grow from where he had begun.

“All I want is to change the world,” says Vince, and it’s only partly tongue-in-cheek.

Or perhaps, not at all.

The owner of Moorlands Biodynamic Lamb – his Demeter biodynamic Texel lamb is a four-time gold medallist at the Delicious Produce Awards – is hoping that his research as a PhD candidate at the University of Canberra will further these world-changing aspirations.

“Study has provided me with information – but also made me ask so many more questions. Now, I am hoping to uncover the answers as to why more farmers don’t take up regenerative farming practices,” Vince says.

Regenerative agriculture is a practice that gives back to and rejuvenates the land, just as it takes; it’s an ethos built on respect for the land, for animals, people and the planet, and has hugely impacted Moorlands, the farm in Biala, NSW that has been in Vince’s family since the 1830s.

“If we figure out what the barriers [to uptake of regenerative farming] are, we can work towards better government policy and support for farmers. It’s about shifting the focus, to help people understand how they can benefit from such practices,” Vince says.

“When I took over the farm in 2002, we had 7,800 sheep in 45 paddocks – which just didn’t make good ecological sense.”

Closing off denuded paddocks to the sheep, Vince rotated their feeding spaces – similar to how zebras graze nomadically on Kenya’s Maasai Mara game reserve, he says, a moveable feast on the farm allows soil and grass time to recover.

This is just one of the organic and biodynamic practices Vince has put into place over the years. He also works with
local Indigenous peoples to implement Indigenous land management techniques into his practices.

“This is also important in terms of fire management techniques, because Australian grasslands burn differently – or should,” he says. “Fire should be more a ‘cleansing of country’ than a devastating forest burn. My farm is on Pajong country – a clan of the Ngunnawal people – and is also on the border of Wiradjuri and Gundangara country, and I work with all the groups.

“I think it’s important to acknowledge that they are the traditional owners of the land, with experience spanning a thousand generations – and I am just a sixth-generation farmer. Their knowledge and ways should be highly respected, revered even.”

His paradigm shift is the result, Vince says, of putting the ecosystem at the centre of decision-making.

“We saw the significant results of a healthier habitat, about 10 years after we started our biodynamic practices – including the farm becoming better able to cope with drought,” he says.

“As a farmer, there’s a tendency to place your livestock or produce and profit at the centre of your decision-making – which is understandable. But choosing to go organic and biodynamic doesn’t mean having to choose between sustainability and profitability.

“I am now much more profitable, because I run fewer lambs – which are in higher demand, and sold at a premium price.”

He’s not running an ecopark, Vince says – he just wanted to change the way decisions were made.

Nonetheless, there is a lot of tree-planting going on. Lambs graze on the native grasses and shrubs which are planted and encouraged, and gain a distinctive, delicious flavour – but there are more beneficiaries out there, including those on the brink of extinction, like the superb parrot, golden sunmoth, southern pygmy perch and yellow-spotted bell frog.

Each of these has been the focus of individual conservation projects at Moorlands.

Vince and his family have teamed up with conservation experts to help save the yellow-spotted bell frog, and to turn some dams on the property into sanctuaries for the southern pygmy perch.

“Invariably, when you try to help one species, you will help others,” says Vince. “For instance, we’ve planted 720 paddock trees especially for the superb parrots, but they also benefit bats and gliders.”

Superb parrots like to nest in the hollows of these particular trees – but each tree has to be at around 130 years old to develop the hollows in the first place.

Vince is playing a long game – and believes it’s more than worth it.

“You’ve got to lay the foundation somewhere,” he says. “It’s simply about making that decision at some point, to do things better – and hopefully, to help other people to as well.”
WALKING THE ROAD TO RECONCILIATION

The University of Canberra launched its Stretch Reconciliation Action Plan last year, moving further on its journey of the heart, towards strengthening relationships between Aboriginal and Torres Strait Islander peoples, and non-Indigenous peoples, for the benefit of all.

JOURNEYING TOGETHER

STORY: ELLY MACKAY
PHOTOGRAPHY: TYLER CHERRY AND SOURCED
I have to say that our institution leads not only in terms of documentation, but also in our commitment to achieving Reconciliation.

For final-year Bachelor of Communications (Journalism) student, and proud Gumbaynggirr, Yuin and Biripi woman Adina Brown, attending a university with a Reconciliation Action Plan (RAP) has had a large impact on her studies.

“As an Aboriginal student, being supported by a RAP helps to make me feel more accepted and acknowledged by the UC community and the university as a whole,” Adina says.

“It can be a hard experience in general going to university – I moved away from my family to live alone and start a new life. To make new friends and find a new routine is difficult when you get homesick and miss your mob.

“Going to a university that goes out of its way to include and support its Aboriginal and Torres Strait Islander students has really made a difference in my journey.”

UC’s latest initiative towards achieving Reconciliation is the 2021-2024 Stretch RAP which was implemented in May 2021, following the success of the previous plan.

The current plan – led by former Pro Vice-Chancellor, Indigenous, Professor Peter Radoll, Deputy Vice-Chancellor, Research and Innovation, Professor Leigh Sullivan (until his retirement in late 2021), and the Office of Aboriginal and Torres Strait Islander Leadership and Strategy (OATSILS) Business Manager Kirsten Tapine – aims to cement UC’s position as a leading institution in the journey towards Reconciliation, and the institution of choice for Aboriginal and Torres Strait Islander staff and students like Adina.

“Reconciliation frameworks and RAPs enable organisations to contribute to Reconciliation in a way that works with their strengths,” Peter says.

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Adina says that from a student perspective, it’s comforting that a RAP helps to keep the university accountable.

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is categorised according to Reconciliation Australia’s RISE framework, which reflects where an organisation is at in their Reconciliation journey: Reflect, Innovate, Stretch, or Elevate.

A Stretch RAP is best suited to organisations that have developed strategies and have established a strong approach towards advancing Reconciliation internally, and within the organisation’s sphere of influence.

“According to the framework that Reconciliation Australia follows, we currently sit at the Stretch level, which is the second highest stage,” Kirsten says.

“The Stretch level refers to how we embed Reconciliation in our organisation and our business strategies, so that they become ‘business as usual.’”

For the University of Canberra, the opportunity to implement longer-term business strategies in order for them to become the usual is a goal that has been worked toward for many years, and is continuing to come to fruition.

“Succeeding in these areas really does take a strong commitment – a commitment from Executive, a commitment from Council, and from everyone in the institution to practise Reconciliation,” Peter says.

The 2021–2024 RAP is divided into five sections that provide guidelines with regards to relationships, respect, opportunities, education and research, and governance.

RELATIONSHIPS

This section commits UC to building reciprocal engagement with Aboriginal and Torres Strait Islander peoples to ensure that the University community feels a sense of pride and opportunity through their engagement with Aboriginal and Torres Strait Islander peoples, perspectives, and contributions.

“A big part of this section is a commitment to national events, including Reconciliation Week activities as well as NAIDOC Week,” Kirsten says.

“To get the entire University community involved and attending these events is a key goal for us, and so far, we’ve seen a large increase in people putting their hands up and wanting to be involved.

“These are opportunities for us to show we’re not just talking the talk, but we’re really walking the walk.”

The commitment encompasses several additional areas, including cultural competency for all staff and students, the celebration of culturally significant dates, and the promotion of anti-discrimination strategies.

“Promoting positive race relations through those anti-discrimination strategies is important when it comes to the relationship section – and the way we can do that is by educating non-Indigenous community members about Aboriginal and Torres Strait Islander ways of being,” Peter says.

It also means providing a voice to Indigenous staff members, which Peter and Kirsten both agree is key to an equitable organisation.

“I’m really seeing the University driving Indigenous-led solutions through the Ngunnawal community and other Aboriginal community members – we’re getting a seat at the table and having a say,” Kirsten says.

“We’re getting an opportunity now to be consulted more than we ever have,” Peter adds.
RESPECT

“We’ve included a lot of things in this RAP based on our previous learnings, and that includes increasing cultural awareness and understanding and conducting reviews on the cultural learning within UC,” Peter says.

By making programs and policy relating to Reconciliation accessible and relevant, this section aims to value and respect the experiences and cultures of Aboriginal and Torres Strait Islander peoples when building UC as a diverse education, research and workplace hub.

The respect section also commits to increasing understanding, value, and recognition of Aboriginal and Torres Strait Islander cultures, histories, knowledge and rights as well as protecting cultural heritage through UC’s campus development.

“We know there is going to be significant development over the next ten to 20 years on campus, and something that we can certainly improve on is protecting that cultural heritage of the Ngunnawal land – we’re really putting a focus on it,” Peter says.

“That in itself will help build that relationship between us and the Ngunnawal Elders and the Ngunnawal people here in the ACT.”

Kirsten says that recognising and understanding Aboriginal culture is important too – one way the University is sharing the messaging is through a new, publicly available guide.

“We’ve introduced a new Cultural Protocols Guide, which is a document outlining the culturally respectful way of addressing items of significance to Aboriginal and Torres Strait Islander peoples,” she says.

“It is a requirement of the Stretch RAP to have this guide, but it’s also something we found the University really needed, and the feedback so far from staff has been really positive.”

OPPORTUNITIES

An area that UC has thrived in previously, the opportunities section seeks to ensure that employment opportunities for Aboriginal and Torres Strait Islander people are plentiful, and aims to achieve parity in employment so that three per cent of staff across the University are Indigenous.

“Having Indigenous employment levels sitting at three per cent is mandated by the Federal Government and Reconciliation Australia, as three per cent is proportional to the Indigenous population,” Peter says.

Kirsten and Peter say that employment levels are an ongoing priority at UC – not just in terms of recruitment, but also in retaining Aboriginal and Torres Strait Islander staff.

“We need to build an ecosystem of support for our Indigenous staff members – we need to ensure their skills are being utilised, that their managers are supporting them culturally, and that we’re creating opportunities and career pathways for them,” Peter says.

This section also encompasses the engagement of Aboriginal and Torres Strait Islander suppliers, with a procurement target of three per cent Indigenous procurement by 2023.

“Our new document actually has a big jump in this area, while the previous target was 1.5 per cent,” Kirsten says.

“We are in the process of implementing an Indigenous Procurement Strategy, which is really exciting.”

As with many items in the plan, the opportunities section ties in with other areas across UC.

“In terms of opportunities, we need to intertwine the values with the respect and relationship aspects of the RAP – then we’ll be able to nurture our Indigenous talent and ensure they can thrive,” Peter says.

That talent includes Adina, who – throughout her studies – has had the opportunity to partake in the CareerTrackers program, an Indigenous internship program aimed at giving Aboriginal and Torres Strait Islander students industry experience.

“Through CareerTrackers, I’ve now had six rotations in a corporate workplace every semester break, where I’ve gained real-life experience and added achievements to my resume,” Adina says.
EDUCATION AND RESEARCH

As a student-focused institution, education and research are at the forefront of everything UC does. Improving educational outcomes for Aboriginal and Torres Strait Islander students is a key focus of the 2021-2024 RAP.

“One of our biggest achievements in this area is that we have a great document called the Indigenising the Curriculum Framework, which provides guidance to academic staff members about how and where to include Indigenous cultures and perspectives in their teaching,” Peter says.

There is also an aim to enhance research capacity, create an Indigenous research group, and grow postgraduate student and research numbers.

The RAP also includes educational support of Aboriginal and Torres Strait Islander students through the long-running Ngunnawal Centre program.

“I’m a regular user of the Ngunnawal Centre and have really found a home in that community,” Adina says.

“It’s been an awesome place to connect with other students and Indigenous community members – but it’s also been a great place to study and has helped me get through multiple exams and assignments.”

The goals outlined in this section include an increase in Aboriginal and Torres Strait Islander student recruitment, retention, and progression, and to continue to embed Indigenous perspectives and pedagogies within the University curriculum.

To meet these goals, supporting Indigenous students is key. While living on campus, Adina is grateful to have received a scholarship to support her studies.

“The scholarships that I’ve been lucky enough to receive have really relieved me of the financial burden that comes with living away from home, and that gives me more time to focus on my studies,” Adina says.

GOVERNANCE

“To ensure each section of the RAP is adhered to and accounted for, a RAP committee has been formed. The committee will actively monitor RAP developments, build accountability and transparency through reporting, and continue UC’s Reconciliation journey by developing the next RAP.

“The RAP Committee meets quarterly, and really drives the actions and tracks what has been completed,” Peter says.

“In addition to the RAP committee, we have also appointed RAP champions in areas across the University,” Kirsten says.

“They play a massive part in implementing the actions out of the document.”

Kirsten says that increasing the number of champions across campus is a priority to ensure actions are being promoted far and wide.

“At the moment we have four RAP champions, a number which we’re definitely looking to expand,” she says.

“I hope that eventually one day, everyone will be a RAP champion!”

Overall, Peter and Kirsten hope that, at the very least, Reconciliation values can continue to be embedded in everyday actions to the point that they become normalised, and can provide opportunities for non-Indigenous staff and students to accept the culture of the land they live, work and study on.

“It’s about bringing people together and having us walk hand-in-hand to help us make a better world for Aboriginal and Torres Strait Islander people, and for all Australians,” Peter says.

“In terms of the Reconciliation movement, it’s really a movement of the heart and a way forward between Indigenous and non-Indigenous people. It’s also about creating a deeper understanding of the history, culture, differences and similarities of Indigenous and non-Indigenous Australians and respecting these things about one another – we all play an important role in this.”

“It’s not just an Indigenous issue, it’s not just a non-Indigenous issue. It’s a problem that we need to come together to fix and reconcile, so that we can move forward and improve relationships between Indigenous and non-Indigenous Australians.

“...it’s really a movement of the heart and a way forward between Indigenous and non-Indigenous people.”

OATSILS’ Business Manager, Kirsten Tapine.
Experts from the University of Canberra weigh in on values and risk, and where cryptocurrencies could take us in the future.

Whether it was Bitcoin hitting an all-time high last year, or billionaire techpreneur Elon Musk announcing that his company Tesla would accept the cryptocurrency as payment in early February 2021 – only to flip on the decision by May – there has been plenty of discourse around the topic of cryptocurrencies.

However, with their ever-fluctuating values and a host of cryptocurrencies on the market, it can be hard to decipher what the hype is all about.

Two University of Canberra experts – an economist and a cyber security specialist – wade into the discussion, to talk about the benefits and uses of cryptocurrency worldwide, and their visions of where it could go in the future.

“Bitcoin has been going for 13 years, and has basically never taken off as a payment instrument.”
WHAT IS CRYPTOCURRENCY?
The first official cryptocurrency to launch – Bitcoin – hit the market in 2009, its creator/creators using the pseudonym Satoshi Nakamoto.

Although the concept – and the technology which enables it – had been floated in the years leading up to that moment, Bitcoin was the first to take off.

Dr John Hawkins, an economist and Senior Lecturer at UC’s School of Politics, Economics and Society, and formerly with the Reserve Bank of Australia, explains the motivation behind the concept.

“It started off as a private sector alternative to normal currency like the Australian dollar, but cryptocurrency was not issued by any government entity,” he says.

“That was attractive to libertarians who didn’t like governments – and who did like the idea of making payments without banks charging extra fees.

“One of the earliest Bitcoin transactions was conducted by somebody who paid 10,000 Bitcoins for someone to deliver two pizzas to him. That amount would be worth around $600 million now – I hope it was good pizza.”

MINING THE SYSTEM: HOW CRYPTOCURRENCY WORKS
Cryptocurrencies are decentralised, peer-to-peer digital currencies.

Each transaction is tracked through a public ledger, using blockchain technology.

These transactions remain secure – and are logged throughout the blockchain – because of people referred to as ‘miners’, says UC’s Associate Professor in Cyber Security at the School of Information Technology and Systems, Dr Abu Barkat Ullah.

“Miners are like the workforce of cryptocurrencies – people with good analytical and computer skills, and access to relevant high spec hardware and software,” he says.

“A new transaction creates a complex numeric problem, and miners essentially race to be the first to complete that in order to verify the transaction. If they are successful, their reward is unlocking crypto tokens for themselves.”

Bitcoin miners are eligible to make money once they verify one megabyte worth of transactions (known as a block), which could be several thousand transactions.

Once they are eligible, miners earn 6.25 Bitcoin for every one block mined, working as an independent body to keep the system decentralised and honest. In July 2021 alone, one Bitcoin could be worth anything from $AUD40,000 to $57,000 each.

THE PEOPLE USING CRYPTOCURRENCY
Although there are thousands of cryptocurrencies on the market – and despite countless testimonials from successful investors – they are yet to be accepted as a mainstream payment method in the Western world.

While only a handful of companies accept cryptocurrency, that hasn’t diminished its popularity among many investors – in Australia, it’s the younger generation of investors that finds it particularly attractive.

A 2021 report by comparison website Finder revealed that one in six of all Australians owned cryptocurrency, with those figures doubling when it came to Gen Z (31 per cent).

In every industry or process, you need to have that opportunity to grow and evolve.”

A separate survey by leading financial services provider Savvy, found that Australians between the ages of 25 and 34 were the most likely to possess crypto, while almost three-quarters of those over 65 had no interest in it.

However, John explains that while cryptocurrency may be attractive as a speculative asset, it isn’t foolproof.

“People buy it because they think the price will keep going up and they’ll be able to sell it at a higher price,” he says.

“You see media stories about people who are saving for a house and think, ‘well, if I’m putting my money in the bank and just getting 0.1 per cent interest, I might as well buy Bitcoin and the price will double in the next year’ – but of course, the price can just as easily halve in a year, and you’ll be that much further away from your goal.”
THE PROS OF CRYPTO...

One of cryptocurrencies’ biggest pros would be the lower transaction fees – and as Barkat mentioned, blockchain technology makes them very secure.

Cryptocurrencies are kept in a digital wallet and accessed with a private key – essentially, a personal algorithm which allows its owner to spend them. A private key is usually a complex alphanumeric sequence.

This makes the currency so secure, says Barkat, that there have been many instances of people being locked out of their own accounts.

Both security and affordable transaction fees are big plusses for people sending money internationally.

John says that one of the biggest risks related to cryptocurrency is that it doesn’t have any underlying asset, unlike a share where you are entitled to a proportion of the dividend.

This means that the price of cryptocurrency is only worth something if somebody else will pay more for it.

To illustrate: In early February last year, Musk purchased $US1.5 billion worth of Bitcoin, driving its price to a then all-time high a few months later.

“You have people buying it because they think someone else will want it at a higher price, and that sort of speculation almost always ends in tears,” John says.

“I mean, it’s one of the ironies that is cryptocurrency – it prides itself on being decentralised, and yet it can be dominated by one person’s Tweets.”

Another controversial issue: the huge amounts of energy used by the computers which continue the blockchain.

Recent studies have shown that Bitcoin miners are producing as much carbon pollution as a nation the size of Malaysia or Sweden.

However, Barkat says that like anything in its initial stages, processes and procedures are likely to be put in place to combat this.

IN DEVELOPING COUNTRIES

Cryptocurrencies are being used to boost economies in some developing countries.

El Salvador became the first to recognise Bitcoin as legal tender, on 7 September 2021.

While many speculate that this could be a ground-breaking move for the country’s troubled economy going forward, John isn’t so sure.

“The fact that Bitcoin is so volatile makes me worried for poor people putting all of their money behind it,” he said.

“Our fluctuation alone makes it much more risky than central bank currencies, especially in the developing world.

“I also find it ironic that a coin beloved of libertarians is only accepted by shops ... where a government passes a law compelling them to do so.”

Barkat says that given anyone with Internet access has access to cryptocurrencies, they open up a world of opportunity.

In many developing countries, cryptocurrencies are used to avoid financial repression.

“Used in this way for remittance, crypto can reduce banking fees and help to execute transactions much faster and more cheaply than traditional bank or similar financial services,” he says.

“This can help to boost a global workforce, as a service provider or freelancer can easily be paid regardless of their geographical location.”

“In many developing countries, cryptocurrencies are used to avoid financial repression.”
"Look at cars – we drive for our convenience, and nobody thinks twice about it. Once we realised the environmental impact of vehicle emissions, we looked at alternatives like renewable energy sources and hydrogen power for fuel cell electric vehicles," he says.

"In every industry or process, you need to have that opportunity to grow and evolve."

Another highly criticised point is that the level of anonymity within cryptocurrency transactions means it can be used for illicit activities.

Many believe cryptocurrency can be very attractive to people wanting to move large sums of money on the black market or dark web.

Barkat explains that data has shown only a small percentage of cryptocurrency transactions have been proven unlawful.

“A study in 2019 on criminal activity in cryptocurrency presented that 2.1 per cent of the transactions were illegal,” he says.

What Does the Future of Cryptocurrency Look Like?

Many people have differing opinions on this – as do our experts.

John doesn’t see it taking off as a payment method.

“Bitcoin has been going for 13 years, and has basically never taken off as a payment instrument,” he says.

“Amazon will sell you an ‘I Accept Bitcoin’ t-shirt – but you can’t pay for it using Bitcoin. I think eventually, people will just sort of get sick of it and put their money into something more sensible.”

Nonetheless, John sees potential in digital currencies, which use blockchain tech, but – unlike crypto – operate with centralised authority and require user identification.

“It could get to a point where more central banks will issue digital currencies, it’s being talked about,” he says. China’s central bank unveiled e-yuan in 2019, and has been slowly rolling it out since.

Last year, central banks in the Eastern Caribbean issued their own digital currencies.

However, Barkat believes that with the right processes put in place, cryptocurrency could be the way of the future.

“At this moment, we have got our banking system and currency, and other countries have their own – but some day, we might see governments thinking about cryptocurrency as an opportunity of connectedness,” he says.

“We don’t have the legal framework yet, but we cannot ignore the fact that cryptocurrency is here.”

In late 2021, the federal government in Australia flagged plans to overhaul the payments system and regulate fintech, including cryptocurrency.

“The more government and global regulatory boards look to bring cryptocurrency on board, the more successful it could be,” Barkat says.

And digital currency aside, with benefits to be had from cryptocurrency in the developing world especially, we could see more nations follow in the footsteps of El Salvador.

Amazon will sell you an ‘I Accept Bitcoin’ t-shirt – but you can’t pay for it using Bitcoin.”
A LIFE LESS ORDINARY: DRIVING SOCIAL JUSTICE FOR ALL

STORY: SUZANNE LAZAROO PHOTOGRAPHY: SUPPLIED

University of Canberra alumna and CEO of Relationship Matters Janet Jukes OAM has dedicated her life to serving the community, and believes that one person can change the world – by taking everyone else along for the ride.

“In many lives, change – and the opportunity for change – happens at the moment that there is an intervention,” says Janet Jukes OAM.

“It could be something that someone said to you one-on-one, or in a school-wide intervention – but these are moments that help you see yourself, or the world, in a different way,”

Change – whether seeking, creating, or enabling it – has been a lifelong driving factor for Janet, an alumna of the University of Canberra.

Her current roles – as Chief Executive Officer of not-for-profit Relationship Matters Counselling and Mediation, President of the Victorian AIDS Council (Thorne Harbour) and longstanding LGBTIQ+ community advocate – are just a few she has taken on in a bid to catalyse as many opportunities for development as possible.

For her advocacy and community service, she was awarded a Medal of the Order of Australia at the Queen’s Birthday Honours last year.

Janet’s love for serving the community sparked to life in high school. “When I was in Year 9 or 10, we had a volunteer program on Fridays, which included activities like visiting people in aged care facilities – and I just loved it,” she says.

“It exposed me to the value of community service – as I later learned, research shows that people who experience volunteering at a young age are more likely to keep doing it throughout their lives.”

“One person can change the world, but not by themselves – the way they do it is by taking everyone else along on the ride with them.”

In fact, community service became the core of who she was.

“Almost everyone has a story about someone who changed their lives for the better – and nine times out of 10, that story is about a teacher,” Janet says.

So she started out by training as a primary and special education teacher in Queensland – because, she says, “if you want the world to be a better place, working with young people is a good place to start!”

Janet’s first job was in a high school in her home of Queensland, teaching children with intellectual disabilities. She also did a stint in the United Kingdom, teaching at a school in London.

“Many of my students in London came from public housing estates, and I learned that a lot of the disadvantage people experience is due to structural disadvantage – and that as teachers, we can change that.”
Janet’s return to Australia saw her moving to Canberra, where she later decided to pursue a Bachelor of Education at UC, graduating in 1995. She lectured at several universities, even as she segued into the policy and advocacy space – always looking to address that problem of systemic disadvantage.

“I think the decision to work with the AIDS Council was driven by the desire to challenge the prejudice and discrimination that many people were experiencing because of it. And it was personal – I lost close friends to AIDS,” she says.

In a career that has spanned over 30 years, Janet has also worked across youth and family services, community legal services, and research, as well as issues of homelessness, family violence, substance dependence, and mental health issues.

The founding Co-Convenor of the Victorian Gay and Lesbian Rights Lobby (now called the Pride Lobby), Janet has long been on many ministerial advisory committees that have steered Victorian Government law reform in recognising LGBTIQ+ parenting, equality in relationships recognition, human rights protections, and birth certificate recognition.

Janet is currently a member of the Victorian Government’s LGBTIQ+ Taskforce, Co-Chair of the LGBTIQ Justice Working Group, and recently founded the Pride Community Legal Service, a not-for-profit to help the LGBTIQ+ community have better access to legal support.

“We have all worked to improve anti-discrimination laws, to make it safer and more equal for everybody, to change whole of government response,” she says. “And from the time we started – we, because this is a huge community effort – we have changed more than 160 laws. This is crucial work that must continue.”

For those who want to somehow help steer a better world, but have no idea where to start, Janet has just one piece of advice: start anywhere.

“One person can change the world, but not by themselves– the way they do it is by taking everyone else along on the ride with them,” she says.

“We are all parts of a whole, and all these smaller parts affect the bigger picture. Individual efforts matter. So just … start.”

“Almost everyone has a story about someone who changed their lives for the better – and nine times out of 10, that story is about a teacher.”
University of Canberra alumna Olivia Thornton is Cricket ACT’s first female CEO. She talks about her journey from playing on the field to becoming a leader off it, and paving the way for greater equity in the industry.

In Australia’s sporting industry, women hold only 24 per cent of Chief Executive Officer (CEO) positions in the workforce – a number that’s even lower across all industries in the country (18.3 per cent).

The statistics certainly indicate that corporate Australia is a man’s world – but University of Canberra alumna Olivia Thornton is breaking the mould in her new role as CEO of Cricket ACT.

As the organisation’s first female CEO in its 99-year history, Olivia’s role is encompassing the skills she’s picked up through her playing, coaching, and administrative career to take the association to new heights – and it stems from her own passion for the sport.

Olivia began playing cricket as a child – much to the surprise of her family, who weren’t fans. It was one of many extra-curricular activities she participated in, most of them sport-related.

“Sport has been such an important part of my life – I’m a sports nut. I love all and have dabbled in most,” Olivia says.

“I started playing cricket at 12, and I can’t imagine my life without it.

“I certainly wasn’t a standout player by any means, but I could bat and bowl. I think it
generally, with girls and young women having huge potential.

She’s also aware of how her role as the first female CEO in Cricket ACT’s history can pave a pathway for other women in the industry.

“I think I do have a good platform to help other female administrators in our game, in our local community, and in other sports, to provide them with a pathway to potentially landing a senior leadership role somewhere,” Olivia says.

“My history with the sport, and my career experience, mean that I perform well under pressure, and I know that I’m capable. I know where my strengths are, and equally I know where the gaps are – and I think that’s what leadership is about. “If I’ve opened doors for other people then that’s great – I hope that one day I’m not the ‘female CEO’... I’m just the CEO.”

was probably more my willingness to just get in and be the best teammate I could be – if I was picked that was great, but if I was the twelfth – the reserve player – I ran those drinks as good as anyone can run drinks.”

Olivia’s resilience – perhaps developed through her upbringing on a Hawkesbury farm – ensured that even if she wasn’t chosen to play, she was happy to be involved with the team in other ways.

It also meant that when she was ready to take a step back from the game, she was well prepared for the world outside it.

“It can be an interesting thing, transitioning out of elite sport and into the normal world, and sometimes that can be really tricky for people,” Olivia says.

“I think having a solid foundation in terms of a university degree and outside experience can really support the wellbeing of athletes.”

It’s an area she knows a lot about – when she returned from playing professionally in England, Olivia turned down a job in Sydney to work in the athlete wellbeing space at the Australian Institute of Sport, supporting athletes ahead of the 2016 Rio Olympic Games.

And although her time away from the game was fulfilling, she eventually found her way back into the cricket world – at first through Cricket Australia, and later Cricket ACT.

It was Olivia’s leadership skills – gained throughout her time playing – that really propelled her through the ranks in her career, in which she has played as an elite athlete in both Australia and England, coached, and studied a Master of High Performance Sport (Leadership and Management) at UC.

Her interest in the strategic side of the sport, combined with her business acumen and a passion for the research and methodology behind elite sport, have culminated in her role with Cricket ACT.

“There are so many transferrable skills in terms of study, and that has certainly contributed to where I am now. Investing in my career is something I will continue to do, and opportunities to upskill will pay dividends in the future,” Olivia says.

That future is bright. Olivia speaks to the culture of cricket, and sport more generally, with girls and young women having huge potential.

Olivia hopes to pave the way for more women in a male-dominated sport.
EVERYONE IS INVITED: INCLUSIVITY IN SPORT

Meet the members of the University of Canberra community who are working to make sport more accessible and inclusive for all.

SPORT

STORY: ELLY MACKAY
PHOTOGRAPHY: TYLER CHERRY AND SUPPLIED
Sport is in Australia’s DNA.

Most kids spend their weekends down at the local oval or courts, kicking, throwing and catching.

But whether it’s physical limitations, health issues, or participatory reasons, for some people, there are barriers stopping them from being involved in sport.

Many University of Canberra community members work in the sporting realm to help improve participation, retention, and outcomes for participants in sport, making it more accessible for all.

“Every time I get to put on the green and gold and represent Australia, it really is a ‘pinch myself’ moment. I’m literally living the dream.”
SARAH WALSH

Bachelor of Sport and Exercise Science student

Sarah Walsh was born with a condition known as fibular hemimelia, missing a fibula (bone) below the knee. While most people are born with two fibulae, Sarah only had one – so her parents made the decision to have her foot amputated at the age of 18 months old.

Since then, she’s worn a prosthetic leg – something she hasn’t let get in the way of her passion for sport.

“I’ve always loved sport, but it was through school that I found athletics. One of my teachers approached me to let me know that she’d entered me in the para-athlete competition for the zone,” Sarah says.

“She entered me in all the events that she possibly could – and of course I said yes, because it meant I got a day off school with my friends.

“The rest is history – I fell in love with athletics that day.”

While Sarah continued her involvement in the athletics world, she also tried her hand at other sports, including netball, dancing, swimming, gymnastics, surfing, and wheelchair basketball.

She says that she never felt as though she would be bullied or left out for her physical disability.

“Any sport that my friends were doing, I gave a go. Some of them I was absolutely useless at – for example, I definitely couldn’t point my foot in dancing, and I still can’t do a cartwheel to save my life, but I was having lots of fun,” Sarah says.

She made her debut at an international level for the long jump, ahead of the 2014 Glasgow Commonwealth Games when she was 15.

Since then, she’s gone on to represent Australia at three World Championships, the Rio Paralympics in 2016 and more recently, the Tokyo 2020 Paralympics.

“Every time I get to put on the green and gold and represent Australia, it really is a ‘pinch myself’ moment. I’m literally living the dream,” Sarah says.

“At any competition, I’d be quite happy to just go there and jump and have lots of fun, and that to me is success. If I get to win a few medals and wear the Australian uniform – and be one of the best athletes in the world – that’s just the icing on the cake.”

Sarah wants to ensure that other children and young people who have a disability don’t face any barriers when it comes to their involvement in sport. As such, she has become an ambassador for Limbs4Life, a charity which provides support to Australian amputees.

She works closely with the organisation to raise money for children going through limb loss.

“In 2016, in partnership with Limbs4Life, I designed a t-shirt for sale, and 100 per cent of the profits from sales went to the charity,” she says.

“Overall, we raised a few thousand dollars, which has gone to families, especially those with young kids who have lost their leg either through limb difference or a traumatic incident. The funds can help them restart their life, get a prosthetic leg, or do something they love, which is pretty special.”

Her work doesn’t end there – Sarah is also an ambassador for Lifeline Canberra, and works closely with the organisation to shine a light on the topic of mental health.

“I’m so proud to work with an organisation like Lifeline, who are just a phone call away. Mental health awareness is more important now than it’s ever been – and reaching out and asking for help is so crucial,” Sarah says.

Nothing gets in the way of Sarah Walsh’s love for sport.
ALASDAIR TUTT

Alumnus, Bachelor of Sports Coaching

In the snowsport realm, the retention of athletes beyond the teenage years can be difficult. Athletes can drop out of the sport for a myriad of reasons, but UC alumnus Alasdair Tutt is researching how asthmatic skiers and snowboarders could be supported to keep competing.

A common problem for snow athletes is the irritation that occurs in the lungs when consistently exposed to cold conditions, so Alasdair is researching how the use of a particular face mask while training could protect athletes’ respiratory systems, and prevent the onset of asthma or other lung conditions.

His Sweden-based research has discovered that the incidence rate of exercise-induced asthma in cross-country skiers is around three times higher than in their warm-weather peers.

“We’re finding that there’s obviously a link between training in cold weather and athletes developing asthma, which is something we’re hoping these masks could change,” Alasdair says.

“The end goal for us is retention in the sport. There’s already so much stress, particularly in adolescents, when they’re trying to progress to that higher level. Cross-country skiing is small enough already, we don’t need to make it smaller by losing athletes to health issues.”

Alasdair also hopes that the masks – if successful – could improve other aspects of athletes’ lives.

“There’s also a quality of life aspect that comes into it – we want to make sure people can live in colder climates but still exercise safely,” he says.

Though in the early stages, Alasdair’s research has recruited participants from various demographics, and in various stages of their snowsport careers, in order to track the progression of the disease from the early stages.

“We have an age range of participants from the age of 18 until about 55 in the study, and also people who are on recreational pathways as well as competitive,” Alasdair says.

“Around 70 per cent of respondents have indicated that if there was a mask that protected their lungs and stopped them coughing, and if research suggested it would be beneficial for them, they would definitely wear it.”

In the future, Alasdair hopes teenagers as young as 13 and 14 might make it a habit to wear a mask while training and competing, in order to prevent asthma from an early age.

He says it’s about changing the culture of the sport.

“What we’d love to say is that coaches of younger athletes would encourage mask use from the get-go, and so we’d start to see the effects of mask-wearing over a longer period,” Alasdair says.

“Having athletes protect their health over the years can only mean good things for them and the sport.”

It’s all about changing sport culture to promote health and longevity, says Alasdair.
BEN SUTTON

Alumnus, Bachelor of Exercise Science and Sport Coaching

As a Year 9 student, Ben Sutton’s soccer coach left him sitting on the bench the entire season. A passionate soccer fan since the age of four, all Ben wanted was to play the game with his classmates. But because of his cerebral palsy, his game time was limited.

“My teacher had volunteered to coach the soccer team, but refused to play me at all because he didn’t think I was doing enough,” Ben says.

He didn’t give up his love for the game though, and at the age of 17, Ben debuted for the NSW para-football team, and then later, for the Australian Pararoos.

Ben’s inspiration to continue playing, despite the obstacles he faced, came from the time he got to meet some Pararoos players – a moment he describes as ‘life-changing’.

It was this experience that prompted Ben, as an adult, to found the Pararoo Development Centre – a program designed to encourage children with disabilities to get into soccer, and provide them with a judgement-free zone to play in.

“I found that a lot of kids with disabilities – or even without disabilities – don’t play sport because they feel judged on their abilities,” Ben says.

“I wanted to break down those barriers and provide an environment where they can just get in and play.”

The centre provides a program for children who are interested in playing soccer, and in its first year provided support to over 20 children.

Ben hopes to not only grow the number of participants, but to expand into multiple locations, so participants (and their parents) can save on travel time and costs.

“In our initial programs, participants have been travelling into Sydney from as far as Wollongong, the Blue Mountains and regional NSW for a two-hour session – so they’re spending longer in the car than they are at the session,” Ben says.

“Eventually, if this program was available to kids across Australia, then that’s my job done. I’d be so proud.”

His message for kids who want to be involved in sport: don’t give up.

“If there’s something that makes you happy – just go, just do it, and it doesn’t matter what anyone says,” Ben says.

“The Pararoos changed soccer-loving Ben’s life. As far as Ben Sutton is concerned, everyone has the right to play – he founded the Pararoo Development Centre, so kids with disabilities could play soccer in a safe, judgement-free space.

“I found that a lot of kids with disabilities – or even without disabilities – don’t play sport because they feel judged on their abilities.”

From the time he got to meet some Pararoos players – a moment he describes as ‘life-changing’.

“I found that a lot of kids with disabilities – or even without disabilities – don’t play sport because they feel judged on their abilities.”
University of Canberra students weigh in on how we can move towards a world with greater gender equity.

Important and historic conversations around gender equality are taking place here in Australia, and around the world. For well over a century, we have seen protest after protest, in which people from all walks of life have come together, angered by discrimination and inequity. With the rise of every powerful new movement, it feels as if walls are slowly but surely being broken down.

There is an important distinction that needs to be made – that gender equality and gender equity are related terms, but have different meanings. In a nutshell, if gender equality is the end goal, then gender equity is the means to get there.

At the University of Canberra, a strong commitment to becoming a national sector leader in equality, diversity, inclusion and access is woven throughout our identity at all levels.

In the 2021 Times Higher Education (THE) Impact Rankings, UC was named first in the world for reducing inequalities.

The Times Higher Education Impact Rankings is the only system in the world that ranks universities according to how they measure up to the United Nations’ Sustainable Development Goals.

And in February 2020, UC received the Athena SWAN Institutional Bronze Award as part of the Science in Australia Gender Equity (SAGE) initiative, in recognition of that commitment – as we undertake even more equity-furthering actions.

While much progress has been made – locally, nationally and globally – we still have a long way to go to achieve gender equality.

So how do we get there?

University of Canberra students share their thoughts on how we can create and sustain a more gender-equal world.
Gender equity is mostly considered as the fairness of treatment for women and men according to their respective needs. Consequently, the understanding of gender equity is deeply motivated by the normative gender binary (female/male or woman/man) and cis-normativity (a discourse based on the assumption that gender identity matches the sex assigned at birth is the norm, and privileges this over any other form of gender identity).

Furthermore, binary thinking hinders the development of equity for all genders, including trans and gender diverse identities. To achieve a more gender-equal world, it is necessary to extend the gender binary understanding of gender equity, to consider a variety of gender matters and issues that goes beyond the needs of women and men. For example, the notion of “50/50” ought to become “40/40/20”, to permit a more flexible approach.

As a woman currently working in the construction industry, it’s a fantastic time to be involved and witness the changes happening to create a more gender balanced construction sector.

The industry in the ACT is committed to creating more opportunities for women. Key industry bodies, government departments and developers across the ACT such as the Master Builders, Civil Contractors Federation, Ginninderry, The ACT Office for Women and the National Association of Women in Construction ACT Chapter have all demonstrated their commitment to employ women in a range of traditionally male-dominated jobs through education, training, and employment initiatives.

I am excited for the future of construction in the ACT, and believe that these types of opportunities are essential to creating pathways for women to experience and enter the industry.
As I’ve moved through different contexts and stages in my life – high school to university, country to city, closeted to out and proud – I have realised that although our push towards gender equality in Australia ought to be commended, we must also consider what we get wrong.

We must do far better to ensure people from diverse backgrounds are included in the gender equality movement.

Don’t run panels with only white, only non-disabled, only cisgender, only straight women.

Elevate the voices of First Nations women who hold the strongest connection to, and the deepest knowledge of, our country.

Make your protests accessible to those beyond the city limits, to those who use wheelchairs and mobility aids, to those who don’t speak English.

We are stronger in our diversity, so we must make it the way forward.

To me, gender equality encompasses the acknowledgement that all people, regardless of gender, hold an equally valued role in our society, and have the propensity to contribute in equally meaningful ways.

With this acknowledgement comes the understanding that all people, regardless of gender, are as fallible as they are capable of brilliance. Put simply, all people should be accountable for their actions, whether productive or destructive, and afforded opportunities for growth, redemption, and positive change.

In the words of the sage poet Kahlil Gibran, “Even as the holy and the righteous cannot rise beyond the highest, which is in each one of you, so the wicked and the weak cannot fall lower than the lowest, which is also in you”. I hope that future discourse surrounding gender equality continues to increasingly incorporate this sentiment.
I went to an all-female high school so the fact that I am often the only woman – or one of two women – in my university classes is something that took getting used to. I have had situations in which a male classmate was struggling with a question and I would offer my advice, but instead they would wait until the teacher is free – to give the exact same advice.

Because women are so in demand in science, technology engineering and mathematics (STEM), there are often quotas around women’s employment, so sometimes if I get into a competitive program, my male friends say I only got in because of the quotas – but I like to remind them that I have a 6.5 GPA and completed two internships. There should be quotas, and I see it as something that women really deserve, to be able to be in the room and make decisions.

It is so good to see how much support and demand there is for women in STEM. I have completed two programs that specifically target women in STEM, but there are hundreds of companies that are looking to support and recruit women in STEM. I hope this only becomes more common.

“We are stronger in our diversity, so we must make it the way forward.”

– Han Worsley
SPARKING THE CONVERSATIONS THAT MATTER

STORY: DANIELLE MEDEMBRIN PHOTOGRAPHY: TYLER CHERRY

The issue of consent has been prominent in the global zeitgeist recently, and closer to home women like Grace Tame and Brittany Higgins have spoken their truths to the Australian public.

We've seen public protests against misogyny and inaction and bungled analogies in communication campaigns, but it still seems we often aren't quite having a real conversation about consent.

That's why University of Canberra lecturer Dr Michael Davies is working hard to equip pre-service teachers with the skills and resources to hold open conversations with current and future generations.

Formerly with the Faculty of Health, Michael's background is in health, sport and exercise science. He transitioned into the Faculty of Education in 2020, with a focus on delivering high quality Health and Physical Education in schools.

In that space, Michael is on a mission to change the way we talk about youth-related health issues, from the ground up.

“I am a big believer that it’s not just the responsibility of the classroom teacher to educate on these topics, but the whole school’s approach in their ethos, curriculum and community engagement,” he says.

“I think just like teachers in schools, everyone needs to challenge their own bias and discourses, and ask themselves why, if they are uncomfortable talking about a specific topic.

“At the end of the day, students need to be provided with evidence-based sources, facts and information so they can make their own informed decisions – and that starts in the classroom.”

In a Primary school, the Health curriculum usually falls to the classroom teacher; in Secondary school, if valued and there is capacity in the school, programs are delivered by a qualified health or physical educator.

That’s why Michael believes in the importance of all pre-service teachers...
Across the Adolescent Health Issues, Practice of Teaching Health and Physical Education, Physical Education, Sport and Society, Health and Wellbeing and Holistic Health through Personal Development units at UC, there is also an emphasis on pre-service teachers learning how to support their students in an all-inclusive style.

Not only are these units cutting edge in the way they talk about subjects such as consent, but also in approaching health issues around sex, gender and sexuality.

“I think UC is quite unique in having these conversations,” he says.

“We tackle these conversations from different angles, such as how to support transitioning students, and what discrimination against transgender people in schools and sport might look like.

“Pre-service teachers don’t have to agree with what is being taught. Although they are encouraged to engage in the units with an open mind, and to acknowledge, appreciate and accept other people’s perspectives and realities to the conversations by end of the semester – which is a huge achievement in itself.”

While Michael is working first-hand to pass these skills onto his students now, as a researcher he also has long-term plans to study and increase the impact of resources like Talk Revolution in the classroom.

While still in its early stages – having been released in July 2020 – the Talk Revolution lessons have been taken up in some Secondary schools across northern New South Wales and Queensland.

Michael hopes to explore these locations as case studies in order to justify an increased use of the resources locally, in both schools and the tertiary education sector.

He is also hoping to study how the videos and lessons impact the overall school environment, as well as teaching in the classroom.

“I’m interested to see how opening up these conversations with resources like Talk Revolution can change the school environment – for example, if they become more student-led rather than being imparted by a teacher,” Michael says.

“Students might be learning all of these things about consent and respectful relationships in the classroom, but my research will focus on how they transfer change within the school community.”

The Australian Curriculum is currently under review, with finalised changes set to be completed for the start of 2022. Michael is hoping that his research can help the Talk Revolution lessons align with the new curriculum and achieve its outcomes across all Primary and Secondary year levels, as well as promoting it across the tertiary sector.

Open and honest conversations about consent are crucial for teachers and students alike.
The ‘One’ sculpture is in between Buildings 5 and 8 (the Library) at the University of Canberra – a fascinating piece, always with yet another facet to discover on every new visit.

Semi-craddled by a grassy mound, the mirrored steel gleam of the ‘One’ sculpture shifts throughout the day, revealing russet tones in an interior painted to represent the ochre of the land. Three undulating arms of stainless steel join at apex and base in this self-supporting sculpture.

It’s the creation of cybernetics artist Geoffrey Drake-Brockman – many of his works include a mirror element, reflecting back in a reciprocal relationship.

The sculpture was gifted to UC in 2019 by Dr Naren Chellapah OAM, a pillar of the Canberra community. It encompasses the values he holds most dear – truth, right conduct, love, peace and non-violence.

“University students have inquiring minds, and it is hoped that with periodic exposure to this sculpture, they may think about identifying and attaining goals with principles,” he said, at the official unveiling of the gift.

“We hope this project will create an object or area of contemplation, so that one can think about transcending the egotistic concept of ‘I’ towards a vision of ‘we’.”
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