ChangeMakers
The magazine for investors in change.

TACKLING CONCUSSION HEAD-ON: How contact sport can traumatising the brain

Teachers partner with students and share responsibility for education

Former foreign correspondent fights for press freedom
Tackling concussion head-on

Former AFL professional player Justin Clarke talks about the trauma of high-impact sport and of being an ambassador for UQ’s Queensland Brain Institute.

Opinion
Explaining what ‘for the public good’ means

Two Perspectives
Academics team with students as partners

Student Success
From farming to aspiring aeronaut

Institute In Focus
Queensland Alliance for Agriculture and Food Innovation

Innovation
UQ researcher helps Red Cross Blood Service boost donations

Industry Snapshot
Peter Greste’s fight for media freedom

Discovery
Peering over the ‘glass cliff’

Engaged Alumni
Adventure Out Loud founder Nate Taiaroa
Collaborations between Australian businesses and universities yield $10.6 billion a year for participating companies and $19.4 billion a year for the nation.

These compelling numbers come from Cadence Economics modelling for Universities Australia, and add to other indications that collaborations with universities make good business sense.

I would argue that less measurable benefits to individuals, families and society are even more valuable.

Although Australia is third in the world for the number of universities in the prestigious Academic Rankings of World Universities top 100, the nation consistently makes a poor showing in global measures of rates of collaboration between business and universities.

Some Australian businesses have been bucking the trend and UQ has been a beneficiary of their mindset. We have a portfolio of brilliant new and longstanding partners whose main work is outside academia, but who leverage our multidisciplinary capabilities, talent pipeline and burgeoning entrepreneurial capacities.

While some are established players with histories of changing the game in their sectors, others are disruptive wunderkinds working with UQ people to shape the new economy.

For instance, various young businesses are based with UQ’s ilab startup incubator at Long Pocket near the St Lucia campus.

They seek to pioneer and promote new technologies and habits across areas ranging from household energy usage to sustainable agriculture. A number employ UQ graduates, offer students internships and drive new research opportunities.

Movus, another ilab Long Pocket resident, which aims to revolutionise the monitoring of industrial machinery, recently raised $4.8 million.

Of course, not all development and innovation moves at the cracking startup pace.

Patient partners have long been seminal to outstanding outcomes for students and graduates, and for the impact of UQ research and innovation. That is reflected in a number of ChangeMakers stories.

A factor our partners have in common is that, even if the economic impact of their work is not easily measured, they contribute to the massive benefits I touched on at the start of this column.

They extend the range and multiply the scale of UQ’s work in ways that we could never do alone.

It is therefore not surprising that collaboration is a key focus of UQ’s Strategic Plan 2018–2021, and something I will continue to talk and write of.

In the meantime, I thank all UQ’s partners. Please tell us what works for you – and how we can improve.

Together we can make the returns to society from high-quality learning and research even bigger.

Professor Peter Høj
Vice-Chancellor and President
Dr Anita Green.
Q&A

with Dr Anita Green

General practitioner Dr Anita Green is a senior lecturer in sports medicine at the School of Human Movement and Nutrition Sciences in the Faculty of Health and Behavioural Sciences, a role she undertakes alongside her clinical practices at UQ Health Care and Prince Charles Hospital’s Heart Lung Institute. In 2014, she was appointed as the Chief Medical Officer for the Gold Coast 2018 Commonwealth Games (GC2018) and in her ‘spare’ time she is Chair of the Brisbane North Primary Health Network.

Is it true that sport and health are common themes in your life?

Yes, I have always had a passion for sport, both watching and participating. While certainly not an elite athlete, I enjoy swimming, surfing and walking. I see exercise as both an enjoyable activity and as a medicine to prevent and/or manage illness.

Is that why you specialised in sports medicine?

Yes, I completed my Master of Sports Medicine back in the ’90s and have been hooked ever since. With Dr Peter Friis, I now co-convene UQ’s postgraduate and undergraduate sports medicine courses. I love the multidisciplinary nature of the field and how we strive to get the best out of ourselves, both physically and mentally. In our area, we liaise with experts in biomechanics, exercise performance, exercise science, nutrition science, and even the history of sport. We also pair our human movement students with medical students, creating cross-disciplinary experiences to break down some of the silos in undergraduate education.

You have worked in medical officer roles at a wide range of sporting events including soccer’s A League, Melbourne 2006 Commonwealth Games, Brisbane Marathon, Gold Coast Airport Marathon and, most recently, the Gold Coast 2018 Commonwealth Games. What attracts you to positions such as this?

I think it’s important to challenge yourself to get the best outcomes for these elite athletes, and the best from yourself, in a potentially high-pressure environment. It’s nice to have a range of things to do and to keep up interest in your profession. Attending major sporting events is also a great opportunity to work with elite sportspeople. It’s wonderful being part of the ‘team behind the team’ that helps support these consummate professionals who have incredible focus and the drive to be the best they can be. Those at the top of their game have a lot to teach the rest of us in terms of discipline, goal-setting, and working with others to achieve the best possible outcome on the day.

What did your role at GC2018 entail?

As Chief Medical Officer, I worked with the Commonwealth Games Federation Medical Commission to support the delivery of a high standard of health care to all athletes, team officials, technical officials, visiting dignitaries and spectators at the Games. Our team also oversaw the delivery of a comprehensive anti-doping program. The GC2018 medical team had more than 1400 highly skilled clinicians as volunteers – including doctors with sports medicine, emergency medicine and general practice experience; sports physiotherapists and podiatrists; pharmacists; nurses; optometrists and sports trainers. Although stressful working in such a very big organisation, I loved being part of a huge multidisciplinary team. It’s also what I love about sports medicine – the massive team effort. And it’s the same in life: if you work with others you will get the best results.

You are also Chair of the Brisbane North Primary Health Network – what does that involve?

I work with a group of like-minded people who want to make changes to the medical system to improve its efficiency and use any cost-savings to deliver a better service. We all want to improve the management of chronic disease for the benefit of our patients and clinicians.

With such a busy life, how do you find time for your own exercise?

Good point! My goal is to be less busy so that I can do physical activity on a daily basis because I understand the importance for chronic disease prevention and know that it’s helpful in lowering anxiety – as well as being enjoyable. I was fortunate to be part of the police escort for the Queen’s Baton relay in North Queensland recently and joined them in walking and running with the baton-bearers. My job was to keep participants – people from their teens to late 80s, super athletic or suffering from terminal illness, able-bodied or travelling in wheelchairs – safe and healthy, and support them if they suffered falls or over-use injuries. It was a joy to leave the desk job of planning and procedures development and walk or jog with these leaders and icons of their communities.

Connect with Dr Green at anita.green@uq.edu.au or healthservice@uq.edu.au.
Footballers have long been celebrated for their ability to take a hit. But what happens when they take one too many? Former Brisbane Lions star and current UQ student Justin Clarke knows all too well after a head knock at training brought his AFL career to a premature end. Clarke is now an ambassador for UQ’s Queensland Brain Institute, where scientists are tackling some of concussion’s unanswered questions, while working to improve diagnosis and management of brain injuries.
Justin Clarke can’t remember the blow to the head that ended his AFL career at just 22 years of age. Some might say that’s a good thing. The problem is that the UQ engineering student struggles to remember the great times before the accident, when he was living his sporting dream. The times that were supposedly the happiest and most exciting of his life.

It was January 2016 and Clarke was working hard to make his mark on the upcoming AFL season – his fifth with the Brisbane Lions. Pre-season training was in full swing at Giffin Park in Coorparoo and the sun was beaming. But as Clarke flew into a marking contest, everything went black.

“Reports say I was pushed in the back as I jumped and when I fell forward I cracked my forehead into the knee of a teammate,” Clarke said.

The collision left the key defender unconscious on the playing field for almost 20 seconds and he was taken to hospital with severe concussion. X-rays cleared him of spinal injuries but, after a week, the concussion symptoms were still strong. Almost two months later, he was still experiencing dizziness, headaches and memory loss.

“I was struggling to concentrate, losing my place in conversations and slurring my words,” Clarke said. “That was pretty scary, but my thoughts were so foggy at the time that I don’t think I could comprehend the full impact of the injury.

“I was just hopeful that everything would go back to normal and there wouldn’t be any lasting damage. Hopefully, I could get back to training and resume my footy career.”

Reality sunk in on a day when Clarke left his Cannon Hill home to drive to university. Along the way he realised he had to stop. He had driven the same route many times but now, with the car idling and traffic banking up behind him, he couldn’t remember which way to go.

“It was a moment when I just stopped and thought ‘I’m not sure what I’m up to here’,” Clarke said. Reflecting on the months and years since the accident, Clarke admits that retiring from football hurt more than the blow to his head.

“I’d been having neuropsychological testing – testing my memory function in comparison to my cognitive function. My memory was still affected and things that I should have been able to do easily were a massive battle,” Clarke said. “It was so frustrating and devastating because at the time of the accident it didn’t seem like a concussion that should have ended a career.

“I knew that to return to footy would be a very silly risk to take. But I was worried I would be letting people down if I didn’t – my teammates, the club that had put so much time and effort into developing my game, and my parents who supported me the most to help me succeed.

“Eventually the doctors took the decision to retire out my hands, which was a relief.”

It’s a common scenario and Clarke is just one of a worryingly long list of athletes around the world with reported brain injuries due to high-impact contact sport.

Rugby and AFL footballers lead the list of Australian athletes, while a significant number of National Football League (NFL) players in the US are experiencing similar injuries.

The 2015 film Concussion tells the story of a forensic pathologist’s attempts to shine a light on the NFL’s hidden secret of chronic traumatic encephalopathy (CTE) – a long-term complication of repeat concussions.

“It was so frustrating and devastating because at the time of the accident it didn’t seem like a concussion that should have ended a career.”

The film’s release represented a peak in public attention on a condition that had previously not been discussed much outside medical circles.

Through research, scientists at UQ’s Queensland Brain Institute (QBI) are working to improve the diagnosis and management of concussive episodes. QBI Motor Accidents and Insurance Commission Senior Research Fellow Dr Fatima Nasrallah uses functional magnetic resonance imaging (fMRI) and other imaging techniques to study what happens to the brain in the immediate aftermath of a concussion, as well as in the following weeks and months.

Her work aims to study brain changes and the effects of different treatments and interventions to reduce long-term damage from concussion.

“Studies from the NFL have shown that players with reported brain injuries are experiencing symptoms of younger-onset dementia, or actual dementia,” Dr Nasrallah said. “There have also been cases of players committing suicide or experiencing psychosis, but the consequences can vary from concussion to concussion.”
Justin Clarke in action for the Brisbane Lions.
A recent University of California San Francisco study, published in the JAMA Neurology journal, found that even mild traumatic brain injuries that do not result in loss of consciousness might have long-term consequences.

In fact, results showed that, of the 350,000 US military veterans who participated in the study, those who suffered a concussion without losing consciousness were two times more at risk of developing dementia.

“Different people can suffer varying effects based on their genetic make-up, lifestyle and injury history,” Dr Nasrallah said.

“The brain has to heal after impact and if a player has suffered multiple concussions, they’re more likely to suffer long-term consequences.

“We really can’t tell what the severity of an injury is likely to be without taking into account the history of that player to determine how long they should stay out of play.”

Dr Nasrallah said longitudinal studies to track brain changes have never been undertaken before, and are the missing piece of the concussion research puzzle.

“Finding a suitable biomarker to test for the progressive changes in the brain induced by a concussion will enable rapid diagnosis and inform the most suitable interventions,” she said.

“At QBI, we are testing footballers and other athletes who haven’t experienced concussion for at least six months.

“We perform a baseline MRI scan to generate a profile of the athlete’s basic brain function.

“If our volunteers happen to experience concussion in the future, they come back for tests within 36 hours, and again over the next seven, 14 and 30 days, so we can track how their brain is changing over that time.

“At one point, we will be able to determine how long it will take the brain to recover from a

**WHAT DOES CONCUSSION DO TO THE BRAIN?**

The brain floats in a protective suspension of cerebrospinal fluid within the skull.

Concussion occurs when either a direct impact or whiplash effect — either through a blow to the skull or the body — causes the brain to move inside the head and collide into the skull.

As a result, neurons are damaged and the brain may bruise at the site of impact. You don’t have to lose consciousness to have a concussion, and the force required for it to occur is small.

It’s estimated that **42 million people** worldwide suffer a concussion each year.

Concussion is difficult to treat. Diagnosis often depends on self-reporting of symptoms, such as confusion, memory loss and headache.
concussion, how severe the damage is, and how long-lasting the effects will be."

Clarke is a concussion ambassador for QBI and said research was crucial in determining how concussion was diagnosed and treated.

But he admits that calmly taking medical advice can be a different story when a player sustains a head knock during a game.

“A player in that moment – whether it’s for the best or not – will want to be back out there. I wanted to be back out there,” Clarke said.

“It’s about being able to control how much say that player has in that moment – and in the days and weeks to come – and being able to ensure their safety.”

Clarke agrees that the AFL has been ahead of the game in terms of managing concussion – working with experts for many years and convening a concussion working group in 2010, long before head knocks began grabbing headlines.

That working group has developed guidelines to help doctors, coaches and players diagnose and manage cases across all levels of competition. These guidelines include a period of rest, monitoring for ongoing or changing signs and symptoms, neuropsychological tests to monitor recovery, a graduated return to activity in conjunction with monitoring, and a doctor’s sign-off before returning to play.

“People love the game for what it is – a high-impact, contact sport,” Clarke said. “From a purist’s point of view, it’s sad to see the game cracking down on the ‘bump’ and other collisions. But in terms of player safety and welfare, it’s a fantastic thing that the players know the rules are there to protect them. There’s no need to be a hero and go back out onto the field if you’ve been concussed or have concussion symptoms.”

Clarke made a return to football this year as an assistant coach with the Western Magpies, in the Queensland AFL competition. It’s a big step forward for the former Lion, who admits he has struggled to be around the game since his accident.

“I get frustrated. Structurally, my brain seems fine, so why can’t I go out and play the sport I love?” Clarke said. “I’ve tried getting involved with other clubs in different capacities since I retired. I would enjoy it while I was there, but then I would head home and think about how they were all doing something that I would really love to be doing. So I removed myself from those situations as much as possible.

“It feels different this time. I have a role and I enjoy being around the game again. There’s a sense of camaraderie that is nearly impossible to find outside a team-sport environment.”

On top of coaching, Clarke is also focused on completing a Bachelor of Engineering (Honours)/Bachelor of Science dual degree at UQ.

“I’m three years into the course and feel very fortunate to be able to study something like this after playing professional football,” Clarke said. “I was very focused on my studies at school and always had a goal to study engineering at university.

“Many players are lost after they retire because football has been their life from such a young age. As a footballer, it’s easy to lose sight of the fact that you also need to think about what you’re going to do beyond the age of 30. It doesn’t necessarily need to be academic, but it’s important to remember that there’s life after the fun and games.”

To learn more about concussion and the research at the Queensland Brain Institute, or to participate in the concussion study, visit qbi.uq.edu.au/concussion.
Associate Professor Kate Schroder from IMB’s Inflammasome Laboratory.
Immune from attack

Associate Professor Kate Schroder may spend her days fighting, but it’s all for a good cause – saving lives.

As an immunologist, Associate Professor Kate Schroder is fascinated by how our bodies ward off disease, and why we often use a ‘sledgehammer’ to fend off apparently minor threats.

“The body’s first line of defence against infectious attack is the innate immune system. If our immune cells encounter micro-organisms or other signs of danger, they draw their weapons and call for back-up, the same way security guards in real life do when they see something suspicious,” she said.

“This process is called ‘inflammation’. Inflammation protects us from the barrage of microbes that we encounter every day, but it can be troublesome if not turned off or inappropriately turned on, leading to chronic diseases such as gout and diabetes, or even neurodegenerative disease and cancer.”

Associate Professor Schroder has made it her life’s mission to discover exactly how our bodies detect danger and why we launch both healthy (disease prevention) and unhealthy (disease creation) inflammation responses, and she is starting to wear the enemy down.

So what sparked this ‘weekday warrior’ work?

While studying her Bachelor of Science at UQ, from which she graduated with first-class honours in 1999, Associate Professor Schroder became interested in biology, and in particular, infection biology and immunology.

“I started my Bachelor of Science with a vague notion of pursuing mathematics. I did not take biology during high school, but quickly became fascinated by it during my first-year biology subjects. In the second year of my studies I started to learn about microbes, the immune system and the interactions between these. I quickly became hooked! It was clear to me that this was the research area I wanted to follow.”

This spurred her to complete a PhD in immunology, the biological study of the body’s defence system – also at UQ – in 2005, where she defined how the macrophage, an important cell of the innate immune system, becomes activated to ingest and destroy foreign matter in the body, and trigger inflammation.

Postdoctoral research from 2005 until 2008 saw her continue work with Professors David Hume and Matthew Sweet at the Institute for Molecular Bioscience (IMB), further investigating the mechanisms of macrophage activation – specifically, what programs galvanise these cells into action. Here, she identified surprising inter-species differences in the inflammatory programs launched by these cells in mice and humans.

She then moved to Switzerland in 2008 as a National Health and Medical Research Council (NHMRC) CJ Martin Fellow where she trained under the late Professor Jürg Tschopp, pioneer of inflammasome biology. It was here that she became an expert on the inflammasome, an important cell-signalling pathway that generates inflammation in the body.

Her expertise was put to immediate use upon her return to Australia, when she initiated the Schroder Lab at IMB in 2013, currently funded by her NHMRC RD Wright Fellowship. With her team of eight, she is defining the molecular and cellular processes of inflammation, seeking to unravel the secrets of inflammasomes to allow for new therapies to fight human diseases.

Her work to date has already garnered much acclaim, including a UQ Foundation Research Excellence Award, a Tall Poppy Science Award and Queensland Premier’s Awards (Health and Medical Research).

“‘Weekday warrior’
Associate Professor Schroder’s life mission is starting to wear the enemy down.”

Inflammasomes are a key pathway that creates the body’s inflammation response that protects us from attack by microbes,” Associate Professor Schroder said.

“My goal is to find out why this pathway sometimes take a wrong turn, attacking the person it is supposed to defend. My lab strives to understand such malfunctions and how we can stop them. I hope that my research will lead to new approaches for treating inflammatory and neurodegenerative diseases.”

Working with Trinity College Dublin, Associate Professor Schroder’s wish may soon come true.

The University of Queensland and Trinity College Dublin have jointly established Inflazome Ltd – a company based in Ireland that is developing first-in-class treatments for inflammatory diseases, which work by inhibiting the inflammasome. New anti-inflammatory drugs could be hitting the marketplace in just a few years. A Series A financing round of €15 million (A$22 million) to commercialise the research has recently been announced by UniQuest, UQ’s commercialisation entity, in one of the largest biotech Series A investments originating from an Australian university.

“This is fantastic news,” Associate Professor Schroder said.

“The faith that our investors, Novartis Venture Fund and Fountain Healthcare Partners, have placed in our work gives us the resources to develop these promising inhibitors as new anti-inflammatory drugs. There is an urgent need for such therapeutics in a range of conditions, including common diseases like gout, chronic liver disease, and Alzheimer’s and Parkinson’s diseases.”

To watch a video about Associate Professor Kate Schroder’s work, view this article online at uq.edu.au/changemakers.
According to English poet John Donne in 1624, “No man is an island entire of itself; every man is a piece of the continent, a part of the main…”

Swap the word ‘man’ for ‘human’ or ‘organisation’ and this is the philosophy of the Bill & Melinda Gates Foundation, a powerful philanthropic group that seeks to reduce inequity in the world.

With the goal of bringing about the kinds of changes that will help people live healthier and more productive lives, the foundation does all its work in collaboration with grantees and other partners, who join with them in “taking risks, pushing for new solutions, and harnessing the transformative power of science and technology”.

Similarly, swap John Donne’s ‘man’ for ‘university’ and the same principle applies to The University of Queensland. When discussing UQ’s new Strategic Plan 2018–2021 recently, Vice-Chancellor and President Professor Peter Høj said that UQ is “an institution determined to anticipate change and adapt to whatever challenges such change presents” and that we “need to accelerate delivery of globally relevant solutions to complex problems – something that will require even more collaboration than currently exists”.

In other words, we can achieve more for the world if we work together.

Fortunately, the foundation and the University are as one on this. Working together on a range of projects to help the world’s disadvantaged, the University has been the grateful recipient of more than US$13 million in grants from the Bill & Melinda Gates Foundation since 2009 (see table overleaf).

All lives have equal value
To enable its vision that all lives have equal value, the Bill & Melinda Gates Foundation has four key missions:

• Ensure more children and young people survive and thrive
• Empower the poorest, especially women and girls, to transform their lives
• Combat infectious diseases that particularly affect the poorest
• Inspire people to take action to change the world.

Ensure more children and young people survive and thrive
The foundation believes that the path out of poverty begins when the next generation can access quality healthcare and a great education. In developing countries, its focus is on improving people’s health and wellbeing, helping individuals lift themselves out of hunger and extreme poverty.

Empower the poorest, especially women and girls, to transform their lives
To achieve this mission, the foundation believes that by giving people the tools they need to lead healthy, productive lives, people can help lift themselves out of poverty, for example, by adopting new farming technologies, investing in new business opportunities, or finding new jobs – particularly for women.

Combat infectious diseases that particularly affect the poorest
To enable this mission, the foundation believes that lives can be saved by delivering the latest in science and technology to those with the greatest needs. The foundation works with partners to provide effective vaccines, drugs and diagnostics, and to develop innovative approaches to deliver health services to those who need it most. UQ has received funding from the Bill & Melinda Gates Foundation to conduct research in each of these three key areas and looks forward to continuing this mutually beneficial partnership.

Inspire people to take action to change the world
Again, ‘together as one’, UQ has a bold ambition to ‘create change’, while the Bill & Melinda Gates Foundation’s fourth mission recognises that for people to be inspired to change the world, more than just financial resources are required. Partnering with governments and the public and private sectors, the foundation works to change public policies, attitudes and behaviours to improve lives and foster greater public awareness of urgent global issues. As does UQ.

If you would like to learn more about the Bill & Melinda Gates Foundation, go to gatesfoundation.org.
<table>
<thead>
<tr>
<th>Who</th>
<th>What *</th>
<th>When</th>
<th>Why</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor Paul Young, Faculty of Science</td>
<td>$100,000</td>
<td>May 2009</td>
<td>To develop a novel vaccine approach that is based on blocking mosquito transmission of these disease agents rather than inducing pathogen-specific immunity.</td>
</tr>
<tr>
<td>Dr Viktor Vegh, Centre for Advanced Imaging</td>
<td>$100,000</td>
<td>September 2009</td>
<td>To test the efficacy of using low-cost nuclear magnetic resonance technologies to detect malaria parasites. The team will examine blood samples to detect hemozoin, a waste product of malarial parasites, to determine the presence of infection.</td>
</tr>
<tr>
<td>Associate Professor Udantha Abeyratne, School of Information Technology and Electrical Engineering</td>
<td>$100,000</td>
<td>November 2009</td>
<td>To use low-cost devices such as mobile phones and MP3 players to record cough and sleeping sounds to be analysed using new algorithms in human speech analysis to identify sounds that characterise the presence of pneumonia.</td>
</tr>
<tr>
<td>Dr Krassen Dimitrov, Australian Institute for Bioengineering and Nanotechnology</td>
<td>$100,000</td>
<td>April 2010</td>
<td>To develop a new diagnostic test that utilises nanoparticles which bind to specific biomarkers in saliva that are present during infection.</td>
</tr>
<tr>
<td>Professor Mark Kendall, Australian Institute for Bioengineering and Nanotechnology</td>
<td>$100,000</td>
<td>April 2012</td>
<td>To develop a new vaccine for rotavirus that uses low-technology engineering methods suitable for the developing world.</td>
</tr>
<tr>
<td>Professor Neena Mitter, Queensland Alliance for Agriculture and Food Innovation</td>
<td>$100,000</td>
<td>May 2012</td>
<td>To develop a <code>BioClay</code> technology to deliver biological agents that kill crop pathogens and pests. (See full story on pp. 20–23 in ChangeMakers 2017 or view online)</td>
</tr>
<tr>
<td>Associate Professor David Jordan, Queensland Alliance for Agriculture and Food Innovation</td>
<td>$3,990,198</td>
<td>November 2012</td>
<td>To generate step change in the capacity and productivity of sorghum breeding programs in Sub-Saharan Africa and to provide a strategic platform to underpin genetic gain for productivity in environments that are water-limited.</td>
</tr>
<tr>
<td>Dr Simon Reid, School of Population Health</td>
<td>$100,000</td>
<td>October 2013</td>
<td>To better achieve consensus from the disparate agricultural, animal husbandry and human health sectors on activities such as disease control by developing a combined metric using multi-criteria decision analysis (MCDA).</td>
</tr>
<tr>
<td>Professor Paul Young, Faculty of Science, and Professor Matt Cooper, Institute for Molecular Bioscience</td>
<td>$100,000</td>
<td>October 2015</td>
<td>To better monitor mosquito populations in the field using ultra bright nanoparticles coated with selected monoclonal antibodies to detect associated microbes such as Wolbachia, coupled with a low-cost readout device.</td>
</tr>
<tr>
<td>Associate Professor John Thomas, Queensland Alliance for Agriculture and Food Innovation</td>
<td>$5,701,703</td>
<td>November 2015</td>
<td>To develop management strategies to enable continued banana-plantain production in areas of ub-Saharan Africa severely affected by banana bunchy top disease (BBTV), restrict further spread of the disease, and to search in South-East Asia for banana germplasm resistant to BBTV for use in breeding resistant varieties.</td>
</tr>
<tr>
<td>Dr Chris Lambrides, School of Agriculture and Food Sciences, and Professor David Jordan, Queensland Alliance for Agriculture and Food Innovation</td>
<td>$2,705,931</td>
<td>November 2015</td>
<td>To contribute to our long-term goal of increasing genetic gains in the public breeding programs we support by funding the creation of an institutional home for our Breeding Program Assessment Tool (BPAT) and for assessments of key breeding programs that in turn inform us of what types of improvements are needed in these programs.</td>
</tr>
<tr>
<td>Professor Kirill Alexandrov, Institute for Molecular Bioscience</td>
<td>$100,000</td>
<td>April 2016</td>
<td>To develop a low-cost diagnostic that uses well-established glucose biosensors to rapidly detect the DNA of infectious pathogens in bodily fluids such as serum and saliva.</td>
</tr>
</tbody>
</table>

*US dollars
The Queensland Alliance for Agriculture and Food Innovation (QAAFI) has received several grants to boost food and nutrition security. At present, UQ scientists are implementing the Bill & Melinda Gates Foundation’s Breeding Program Analysis Tool (BPAT) across key public sector plant-breeding programs in Africa and Asia – for sorghum, rice, maize, wheat, cowpea, chickpea, common bean, groundnut, yam, sweet potato, cassava and banana – to identify how improved breeding programs can lead to greater genetic gains and on-farm profitability.

In another project, which aims to increase the productivity of sorghum breeding programs in Sub-Saharan Africa and other water-limited environments, UQ researchers are using sophisticated computer modelling to enable the rapid development of new varieties that are as water-efficient as possible.

And yet another project sees Queensland scientists tackling one of the world’s worst threats to banana crops – bunchy top disease – by identifying accessions of wild species of seeded bananas with natural resistance to the bunchy top virus.

Initially funded by a Bill & Melinda Gates Foundation Grand Challenges in Global Health Explorations grant, a UQ research project has culminated in a spin-off company that currently has a market capitalisation of about $100 million. Using mathematical algorithms, ResApp Health has developed a diagnostic tool that uses smartphone technology to instantly identify respiratory diseases – just by listening to a person’s cough. The technology has broad application across the world, particularly in economically poor, geographically remote regions where access to healthcare facilities is scarce or non-existent.
Educating future leaders

UQ takes its social responsibility as an educator of future leaders very seriously. Diversity and Inclusion (D&I) is a critical component of modelling the workplace culture that our graduates will seek to emulate when building the organisations of the future.

In a global marketplace defined by fierce competition for high-impact academics and talented professionals, we would like UQ’s domestic and international reputation as an employer of choice to equal its current standing as a ‘global research powerhouse’ and provider of exceptional educational opportunities.

The clear focus on diversity and inclusion, as featured in the new Strategic Plan, will position UQ as an international employer of choice, enabling us to attract, grow, support and retain talented staff in this increasingly competitive global environment.

My current role was newly created in late 2016, to harness and enhance the University’s valiant, but arguably disconnected, efforts towards becoming a more diverse and inclusive workplace. The work at UQ is complex and challenging, but I have ‘earned my diversity and inclusion stripes’ in far more testing contexts.

My pre-UQ life was, quite literally, on the battlefield, as NATO’s Senior Gender Adviser for the Resolute Support mission in Kabul, Afghanistan. This military role entailed advising very senior members of the Afghan government on how to increase women’s meaningful representation in Afghan security institutions.

Senior Afghan leader commitment, cohesive collaboration and international community support were critical to the work of our team. Through a united effort, the Afghan National Army was able to almost double the number of women in its ranks within two years. This was not an easy feat within a deeply challenging security situation, along with myriad cultural impediments to women’s full and equal participation in society generally.

In addition to collaboration and Afghan leadership, our success was predicated on developing culturally sensitive intervention strategies that were founded on rigorous research; developed by those most impacted by the interventions (Nihil de nobis, sine nobi, or ‘nothing about us, without us’); and were measurable and based on sound operational imperatives and practical need.

I had learnt the criticality of those principles through an equally challenging role: my doctoral research and subsequent work to increase women’s representation in the male-dominated occupation of military pilot. This entailed examining the experiences of women in this non-traditional occupation and building whole-of-career strategies to enable women’s increased representation, support and success.

Once again this work was highly successful. There are currently more women in the Air Force pilot training pathway than there were qualified women pilots when my research started, and their overall representation, post-training, has more than doubled since my research began.

These admittedly extreme examples show that change is possible, even in the most testing of circumstances. Some might argue that shifting the demography in academia will be just as difficult, due to the historical, traditional and systemic barriers that seem entrenched in university culture. I don’t disagree, but willingness to critically examine and dismantle the known barriers at UQ is wonderfully refreshing.

The strategic commitment is certainly there; there is a clear business imperative, and there is active participation in D&I across all areas of the organisation. In my experience, these are the critical foundations for success. Adequate resourcing helps too.

Our team delivers tangible and measurable D&I outcomes across a broad range of portfolios, which encompass First Peoples, disability inclusion, the LGBTIQA+ community, gender, cultural and linguistic inclusion, ages and life-stages, and intersectionality. We have a significant number of projects underway this year, including managing UQ’s participation in the SAGE Athena SWAN pilot, developing our new Indigenous Graduate program, and delivering our enhanced Aboriginal and Torres Strait Islander Trainee Pathway program.

We can’t do this work in isolation. I invite all staff to find a way to contribute to building a diverse and even more capable UQ.

Diversity and Inclusion (D&I) is a critical component of modelling the workplace culture of the future.
Dr Deanne (Dee) Gibbon CSC OAM is Associate Director of Workplace Diversity and Inclusion at The University of Queensland. She holds a PhD from the University of NSW and her most recent role, before joining UQ, was as NATO’s Senior Gender Adviser to the Resolute Support Mission in Kabul, Afghanistan. She has previously served as the Head of the Australian Defence Force’s (ADF) Sexual Misconduct Prevention and Response Office (SEMPRO) and was Project Director for the ADF’s Review into the Treatment of Women. Dr Gibbon was a founding member of the Australian Chief of Defence Force’s Gender Equity Advisory Board (GEAB), and was the Air Force’s inaugural Director of Workforce Diversity and Inclusion. Her efforts to progress diversity and cultural reform outcomes in Defence resulted in her winning the 2013 diversity category of the prestigious ‘100 Women of Influence’ awards and being awarded the Conspicuous Service Cross (CSC) in the 2014 Queen’s Birthday Honours. In 2017, she was awarded the Nancy Bird Walton trophy for the most significant contribution to aviation by an Australasian woman. And in 2018, the US Secretary of Defense awarded her the Meritorious Service Medal for her work to increase women’s representation in the Afghan National Army and Police Force. She was awarded an OAM in the 2018 Queen’s Birthday honours list.

Connect with Dr Dee Gibbon at d.gibbon@uq.edu.au.
According to Professor Len Gray, Director of the Centre for Health Services Research, we need both good preventive and healthcare service strategies to help us to avoid or live with the illnesses common in old age.
HEALTHIER OUTLOOK FOR ALL

Nearly half a century ago, singer-songwriter Joni Mitchell said, “Don’t it always seem to go that you don’t know what you’ve got ’til it’s gone.” Although Mitchell was talking about the environment, her statement could apply equally well to health.

And the older we get, the more this realisation starts to hit.

Fortunately for us, UQ’s Centre for Health Services Research (CHSR) is paving the way to improved health services for all Australians.

Led by Professor Len Gray, geriatric specialist and long-time activist for aged care and telehealth, the Centre includes three major programs: telehealth (Centre for Online Health), renal medicine (the Australian Kidney Trials Network), and ageing and geriatric medicine (Centre for Research in Geriatric Medicine). Each is supported by a team of experts in the fields of health economics, biostatistics, informatics and behavioural science – all of whom are dedicated to improving health systems and care. The Centre is located at the Princess Alexandra Hospital in Woolloongabba.

“We want to make healthcare better for all,” Professor Gray said.

“With an ageing society, the demands on our health system are only going to increase, so the system needs to be as efficient and effective as possible. Our goal is to conduct research that will not only make people healthier but also to find answers on how best to streamline administrative, diagnostic and treatment delivery processes, and make health services available to more people.”

The CHSR has already had great success in helping people from rural and remote communities with its telehealth initiative. Through the Centre for Online Health (COH), major breakthroughs are being made in enabling access to hospital care and advice without the need to attend in person.

The COH’s tripartite mission of telehealth research, teaching and education, along with clinical service provision, makes it unique among peer university centres. COH staff are research translation experts and pride themselves on a broad range of research projects that deliver solutions to real-world clinical problems.
Professor Len Gray (on screen) consulting with a medical professional via telehealth link about the care of a nursing home patient.

“New technologies are changing the way we can access good health care, without the usual escalation in costs associated with traditional systems of care.”

According to COH Director and CHSR telehealth program lead Professor Anthony Smith, telehealth has a very important role in the healthcare industry.

“We believe that telehealth has much to offer people who live in rural and remote communities, particularly in Aboriginal and Torres Strait Islander communities where there is little or no access to medical services.

“Our research work with Indigenous communities currently spans care options for those suffering from ear disease, chronic pain, Hepatitis C, diabetes and dementia.”

Partnering with rural Queensland’s Cherbourg community for more than a decade, COH has seen the routine screening of Indigenous children at high risk of chronic ear disease more than double since 2009.

“This is the result of an innovative mobile screening service, delivered throughout the community, by local Aboriginal health workers,” Professor Smith said.

“By using a range of online communication methods (such as videoconferencing and email), we can reduce the cost and inconvenience normally associated with extensive travel to metropolitan areas.”

The COH continues its strong partnership with Metro South Health (MSH) by maintaining responsibility for the operation and management of the Princess Alexandra Hospital (PAH) telehealth centre - considered the finest in the country. The partnership with MSH has resulted in the establishment of many novel telehealth services.

“Rigorous evaluation of these services provides a strong evidence base for the effectiveness of telehealth.”

Mental health support is another challenge for those living in isolated communities and Professor Smith’s team is leading a range of projects – such as virtual peer support for mental health wellbeing, telehealth services in child and youth forensics, and online perinatal and infant mental health support.

In the field of health informatics – where technology is applied innovatively to improve healthcare – COH researchers are providing online support for carers of patients with brain tumours, and providing training for nurses treating cancer survivors. The COH also has a key role in the development of technical standards for digital skin imaging – linked to the use of digital imaging (teledermatology) – for the diagnosis and management of melanoma.
Another aspect is mobile health or ‘m-Health’, which involves using the computing power and internet connectivity on mobile devices to support healthcare services.

“Our researchers are working on the development of apps that can screen, assess and monitor a range of health-related issues, including weight loss, headache disorders and diabetes care,” Professor Smith said.

Having a completely different health focus, another major division of the Centre is the Australasian Kidney Trials Network, a not-for-profit collaborative research group that designs, conducts and supports investigator-initiated clinical trials with the aim of improving life for people living with Chronic Kidney Disease (CKD). Network Chair Associate Professor Carmel Hawley believes their research helps bring evidence to medical practice and so improves outcomes for CKD patients.

“If we can demonstrate how and why a specific treatment works, we can apply these learnings across a broad range of patients, whether child or adult, early- or end-stage, dialysis or transplant recipient, or those suffering from other conditions such as diabetes or proteinuria,” she said.

To date, eight clinical trials have been successfully completed, with many more currently underway.

The Centre for Research in Geriatric Medicine (CRGM) works with partners across the spectrum of health professions – medicine, nursing, allied health, psychology, biomedical engineering, health economics and software development – to improve the delivery of aged care services.

And its successes have been many – from introducing telehealth consultations to initiating hospital-admission troubleshooting procedures to testing television-viewing habits – to determine links with cognitive decline.

Program lead Professor Len Gray is pleased with the Centre’s outcomes since its establishment in 2002.

“We conduct research in many areas, including ascertaining whether the act of sitting exacerbates dementia, defining the early needs of aged care clients in acute care, using telehealth for patients in nursing homes, and identifying the hierarchy of risks of older people in hospital,” he said.

“These projects build on our extensive research on the concept and implementation of telehealth, geriatric assessment and care planning, clinical guidelines for delirium, dealing with falls, and diagnosing and treating dementia."

Home also to the interRAI Coordinating Centre and two commercial enterprises, CeGA Online and Res-e-Care, the CRGM builds on its international collaborations to deliver streamlined health and medical services to the aged in our society. CeGA Online is a web-based software solution supporting comprehensive assessment and care planning for elderly patients, applicable to the most remote parts of Australia. CRGM is also a training provider specialising in the interRAI suite of instruments. interRAI is an international collaboration of around 100 scientists and clinicians aspiring to improve the quality and efficiency of care delivery in services to older and disabled persons.

So what are the chief learnings Professor Gray can pass on to the rest of us on growing old and surviving the current healthcare system? "We are fortunate to be living in an era in which life expectancy is increasing dramatically and we want to be sure that these extra years are spent in good health."

“To achieve this, we need both good preventive and health care service strategies that help us to avoid or to live with the illnesses that are common in old age. New technologies are changing the way we can access good health care, without the usual escalation in costs associated with traditional systems of care."

“This is the focus of the work of CHSR – to provide affordable, high-quality healthcare for all.”

For more details about the Centre for Health Services Research, go to chsr.centre.uq.edu.au.
Pro Bono Publico: For the Public Good

By Monica Taylor
UQ Pro Bono Centre, TC Beirne School of Law

Legal problems in life are often hidden and hard to identify, and vulnerable people in our community are often the most affected.

Everyday problems like health, housing, money and employment usually involve a legal dimension and failing to address them results in poorer outcomes for many people. As legal problems become bigger and harder to resolve, people can experience greater physical, emotional and financial stress.

Designing legal services so that people receive the help they need, when they need it, is a focus for governments and the legal assistance sector across Australia. It’s also something that is strongly embedded in the student learning experience at The University of Queensland’s TC Beirne School of Law. The School’s UQ Pro Bono Centre has coordinated student pro bono legal work in partnership with the legal profession for almost a decade.

Though not a substitute for an adequately funded public legal system, pro bono legal services help bridge the gap and test new innovations in legal service delivery.

‘Pro bono’ generally describes the provision of free [legal] assistance to those in our society who cannot afford [legal] advice and whose problem is a matter of public interest.

Doing legal work on a pro bono basis (‘law for free’) is widely regarded as an inherent professional responsibility of lawyers.

In 2008, academics at the TC Beirne School of Law saw this as an opportunity to formally involve law students in the provision of pro bono legal work. With the support of the then Head of School

Professor Ross Grantham, Professor Tamara Walsh and Dr Paul O’Shea officially established the UQ Pro Bono Centre in early 2009. Professor Walsh recalls the Centre’s humble beginnings.

“At the start we ran the Centre with no staff, no office space and a handful of pro bono tasks. This soon became unsustainable as we realised the demand for student pro bono. We are very grateful that UQ and the Law School have always recognised the importance of the Centre’s work.”

Nine years on, the Centre is the only program of its kind embedded within an Australian university law school and is run by a small team of highly committed professional staff with strong links to the community legal sector. Law School academics continue to play an important role in supervising law students’ pro bono legal research tasks and overseeing the Centre’s various programs.

Through the Centre’s strong partnerships and diversified programs, undergraduate students are offered an opportunity to truly improve access to justice in communities, undertaking learning experiences that empower them to apply their knowledge and skills while serving an unmet public need.

Some students continue to be involved with the Centre after graduating. 2016 Bachelor of Arts/Laws graduate Balawyn Jones has supervised a number of projects, including the publication of strategic advocacy guides for the defence of battered women in Afghanistan who have killed their abusive partners, and a program to draft gender sensitive and victim-centred amendments for the Afghan Penal Code. Local lawyers in Afghanistan are now using the strategic advocacy guides the team drafted, and they have been used in a recent case.

Pro bono legal activities also extend to the high school education system as part
of the Law Education Outreach Program, established by Associate Professor Peter Billings in 2010.

The program harnesses the passion of law students to deliver legal information sessions to high school students on topical issues such as asylum and refugee law, domestic and family violence law and international humanitarian law.

For eight years, Associate Professor Billings has supervised the asylum and refugee law program and says the impact on student engagement and community consciousness is significant.

“This program essentially sprang to life through law students’ concern about the treatment of asylum seekers in Australia and how this failed to meet our international law obligations.

“Our students’ desire to create change and to challenge what they see as a deep injustice on disadvantaged people in our community is inspirational.”

Effective pro bono schemes are necessarily grounded in partnerships and collaboration. The Centre works closely with many stakeholders in the legal sector, including private law firms, barristers and community legal centres, to leverage their pro bono contribution with student input.

Collaboration is at the heart of what we do. It is very much a symbiotic process as we both benefit from and support the profession’s tremendous pro bono contribution.

Our students are tomorrow’s change makers. Through their interaction with the UQ Pro Bono Centre, we hope they will gain a deeper awareness of the social context in which the law operates.

About the author

Monica Taylor is the Director of UQ’s Pro Bono Centre, a position she has held since 2012. Previously, she worked in the community legal sector advising clients across a range of areas of law including housing, disability, mental health and public space law. As Director of the UQ Pro Bono Centre, Monica coordinates the Law School’s Clinical Legal Education program, and is involved in pursuing pro bono legal opportunities for law students. As a former clinic coordinator and qualified solicitor, Monica has taught students in clinical legal settings including the LawRight Mental Health Law Clinic and the Homeless Persons’ Legal Clinic. She leads a dedicated team of three administrative and five academic staff.

To learn more about the Pro Bono Centre’s work, see giving.uq.edu.au/stories/pro-bono-volunteers-championing-fairer-world or view this article online at uq.edu.au/changemakers.

To make a donation, go to uq.edu.au/giving/donations/fund/Pro_Bono_centre.
Students as partners

ChangeMakers spoke with Dr Nicholas Carah from the School of Communication and Arts and two of his former students, Shi Pui Ng and Kirsten Slemint, about the Students as Partners project they all participated in. Co-creation and evaluation of FutureLearn materials in COMU1120 was one of 11 pilots conducted within the project and aimed to reposition students and staff as active collaborators in the process of teaching and learning enhancement. In other words, empowering students to be actively engaged in, and sharing responsibility for, their own education.

The teacher’s perspective

“UQ is changing the way higher education is imagined and experienced.” UQ Student Strategy

When I heard about UQ’s student strategy, the thing that jumped out at me was the connection between working in partnership with students and integrating digital platforms with on-campus learning.

UQ is distinctive in its effort to use online platforms to enhance on-campus experience and active learning generally, rather than just ‘transfer’ learning off-campus. The idea is that if we can use digital platforms to do some things at scale – like deciding what content to teach or developing assessments – that should enable us to do more engaging and social learning activities on campus.

I’m a media and communication academic who specialises in digital media, so the reason this caught my eye was that digital media platforms are both technical and social. Technical in the sense that digital media are tools for delivering content at scale: videos, lecture recordings, automated assessments. But also social, in the sense that they foster new forms of reflective and participatory engagement in online and offline settings.

Here’s the thing – we can put a lot of attention on the technical side, and not enough on the social side. At first glance, we might think that making a course digital means making content. But really, the work is in thinking about the kind of social and learning experiences they might foster.

A digital media platform becomes meaningful, and useful, because of the culture of participation that emerges on it. This is true for Facebook, Instagram, Twitter and Reddit, just as it’s true for digital learning platforms like edX.

Online participation works best, is at its richest, when it interconnects with participants’ real-world relationships and experiences.

We embarked on a project that sought to convert a large first-year Media and Society course into a ‘blended’ form. That meant it would be a mix of on-campus seminars and tutorials, and resources on an online platform. We decided to do this project in partnership with a group of students.

I’d been thinking about the ways in which there were, in a sense, ‘two voices’ in a course. There was the voice of the academic, who tended to explain concepts, present different arguments and fashion ways of thinking about the world. And there was the voice of the student, who was trying to navigate the ideas and employ them in the assessment tasks.

The age-old challenge in university teaching is to hold those voices in a productive exchange.

If we think of the traditional model of the university, the voice of the academic is privileged in the lecture, and the voice of the student is privileged in the small-group tutorial.

Digital platforms offer a new way of thinking about the design of learning as a social exchange between academics and students.

My initial thought was not that digital platforms might be a tool to make teaching radically easier or better, but rather that we are now teaching in a world where both students and academics are immersed in the participatory culture of digital platforms. The University has an important role to play in critically engaging with and developing digital media platforms as an enduring part of our public culture.

My first experiments with animating the student voice in my courses were with Facebook groups. In the early days of Facebook, these had really lively discussions. But, I’d noticed over the last five years that students had become much more reticent to share on these forums.

I’d also started working with students to produce podcast versions of their assessments that we’d share with other students.
Student partnership builds on a longstanding aspect of university culture: the collegial relationship between academics and students. My thought was that student partnership was intrinsic to ‘blending’ courses because it would involve students in the design, production and facilitation of the course. And that would help to model the exchange between academic and student voices throughout the course.

So, we recruited a group of students who had done the course previously and started working together on designing an online version. Our student partners worked alongside us – they came to design meetings, wrote and edited scripts, co-produced audio and video content, evaluated and edited material from a student perspective, and helped facilitate the course once we launched it.

Student partners are particularly good at making their voice and experience a central part of the course. They do this in two ways.

The first is taking the theoretical arguments and concepts of a course and making them real. They share cultural references and experiences with their peers. So, for instance, if we are discussing the data-driven advertising model of digital media, students are good at taking the theory and illustrating it by showing examples from their own Snapchat.

The second thing is that students can model assessments. The student partners produced video and audio that illustrated how they dreamt up their ideas, did their research and produced their final piece. They were also really great at articulating what a course’s meaning and assessments look like from a student perspective. And so, we end up with a course that has a student perspective integrated into its design.

Our partnership is one then that involves an intellectual exchange about the arguments, how we present them, and how we make them useful to students.

My hope is that our partnership is one of many across UQ that will, over the coming years, ensure that the fundamental relationship at the heart of university life – the collegial, creative and intellectual exchanges between academics and students – remains an enduring feature.

Nicholas Carah is a senior lecturer in media and communication at The University of Queensland. His research examines the brand culture of social media platforms, with a particular focus on the promotion and consumption of alcohol. He is the author of Brand machines, sensory media and calculative culture (2016), Media and society: production, content and participation (2015), and Pop brands: branding, popular music and young people (2010).

Connect with Dr Nicholas Carah at n.carah@uq.edu.au.
Shi Pui Ng enrolled in UQ’s Bachelor of Journalism straight from high school, before taking a two-and-a-half year break to travel the world. His travel experiences, as well as his upbringing as an Asian Australian helped him realise the importance of cultural awareness and the power of communication in today’s increasingly globalised society. Now in his third year of study, he hopes to impact the world by working in diplomacy, foreign affairs or humanitarian aid.

Following a successful career in debt collection and private investigation, as well as extensive world travel, Kirsten Slemint decided that she wanted to become ‘David Attenborough 2.0’. And so she enrolled in the joint Bachelor of Science (majoring in zoology)/Bachelor of Journalism program at UQ. Currently in her third year of study, her plan is to create documentary films and use the power of science communication to change the world.
The students’ perspective

Kirsten Slemint (KS): I heard about Students as Partners from one of my lecturers and thought it would be an incredible opportunity. The whole goal of the program was to bring together students and academics and build something – in our case, online course material – that worked well for both parties. Because I have no qualms about expressing my views and providing feedback, I hoped I could accurately represent the views of my peers. I found the whole process very rewarding and fun.

Shi Pui Ng (SN): I also found it to be an amazing experience. I learnt so much. Being involved in creating course content, seeing how content is delivered and how academics consider what to present – I really appreciated the insight into what goes into preparing a course. For my own professional development, working in a group and being treated as an equal – even though the academics were considerably more experienced than me – was just incredible.

KS: We met once a week to collaborate on projects, to help each other and to give advice. We were all contributing equally as colleagues. The academics – our former lecturers, Nic (Dr Nicholas Carah) and Nat (Dr Natalie Collie) – were a dream to work with.

SN: But we weren’t just receiving help; we were helping each other grow, and I think it was refreshing for them too.

KS: The project felt like a breaking down of the proverbial divide between students and academics.

SN: There was no hierarchy within the group, and I felt that Nic and Nat really listened to us and valued the student input. I think the fact we were paid* for our involvement showed that there was respect and value for us and our work. We created and produced audio and visual content about the evolution of media, and its implications and impacts in our everyday lives and society in general.

KS: I couldn’t agree more - and it was also an incredible opportunity for us to build our personal and professional skills with a significant boost to our creative portfolios. We had such a wonderful time making those videos.

SN: It definitely was a highlight of our student career! We had a sense that our ideas were worth listening to and that we had a realistic idea of what could be achieved.

SN: Knowing how the platform was received made it more relatable compared with the original concept from the academics. I think that instead of just passively accepting everything we heard [from the academics], we had a more honest and comfortable relationship and could provide practical examples of how assessment could be improved...

KS: ...in a non-traditional – and sometimes hilarious – way. It was valuable for everyone involved. I have nothing negative to say about the Students as Partners project and feel lucky to have been involved. It really opened doors for me professionally – I even got some paid work as a videographer, thanks to contacts I made as part of the project. Since my goal in life is to make documentaries, this was a huge step in the right direction.

SN: But all in all, we were breaking down the traditional, rigid structure of teaching and receiving information.

KS: And we enhanced our own critical thinking. It wasn’t just theory: it was incredibly practical. We were helping students with real-world application of the course, translating education into something practical. It really broke down those traditional teaching methods.

SN: I think this project is changing education at UQ. It is transformational.

KS: Yeah, it broadened what I thought was possible and in many ways, I feel more prepared than ever to achieve my goals.

We worked together to refine our ideas – the collaboration was amazing – and I think that what we produced will be 100 per cent beneficial to students in the future.

SN: But all in all, we were breaking down the traditional, rigid structure of teaching and receiving information.

SN: I think this project is changing education at UQ. It is transformational.

KS: Yeah, it broadened what I thought was possible and in many ways, I feel more prepared than ever to achieve my goals.

Find out more

To learn more about UQ’s Students as Partners project, visit student-strategy.uq.edu.au/students-as-partners.

* All students involved in Students as Partners pilots were selected on merit and received a scholarship for their participation.
Zachary Sizer experimenting in the aeronautical engineering workshop.
Aspiring aeronaut

Repairing all things mechanical as a boy has certainly been of benefit to UQ Aspire Scholarship recipient Zachary Sizer in preparing for all studies mathematical as a man.

Now a straight-seven (High Distinction) student enrolled in the Bachelors of Engineering (Honours)/Mathematics at UQ, Sizer is reaping the rewards of a rural upbringing that forced him to ‘think outside the square’.

Not that he had a choice.

“I grew up on a 7000-hectare cattle farm in South West Queensland, 90 kilometres from the nearest town of St George, and more than seven hours drive from Brisbane,” he said.

“Home to the immediate family, a few hundred Belmont Red [cattle] breeders, plus some lambs and dogs, we were quite isolated.

“We had to work with what we had and use our ingenuity to solve everyday problems – we couldn’t just wander down to the local hardware store for supplies whenever we needed them; we only visited town once a fortnight.

“I still remember my grandfather making an arc welder with a generator from a WWII plane because that’s all he had available at the time!”

Nor were Sizer and his parents strangers to creative solutions.

“My dad and I have worked on a long list of engineering projects over the years, including installing tanks and troughs for the animals; making a cattle crate for our truck so we could transport the stock; and modernising and extending a big shed for the tractors, which involved changing out the deteriorating timber structure for stronger metal beams – that was a huge job,” he said.

But it was all good experience for life off the farm. As one of only 13 students at Begonia State School (12 kilometres from home), Sizer did well in his studies, winning a scholarship to attend boarding school at Concordia Lutheran College in Toowoomba for his high school years.

With the help of an encouraging maths teacher, and exposure to the school’s new cutting-edge 3D printer, Sizer flourished academically while exploring his love of mathematics.

“I loved that 3D printer,” he said.

“Actually seeing maths come to life, turning around an object in your hand was so interesting. Some of my favourite objects to print were elliptical gears and a Klein bottle – I still have them at home.”

It was this fascination with practical mathematics that drew Sizer to study engineering at UQ. The combination of solving problems and creating something new was something he was very familiar with.

“I chose to study at UQ because it has a great reputation, offered the degree that I wanted, and I was still relatively close to friends and family.

“What I love about engineering is that there is always an answer to a problem and I enjoy learning about how things work.”

Sizer successfully applied for a UQ Aspire Scholarship, designed to provide assistance with the transition to tertiary study for students who have experienced financial hardship.

“I would like to thank the donors to this scholarship for this amazing opportunity – I am very thankful for their support. The scholarship has taken the pressure off financially, and has enabled me to focus entirely on my studies.”

Which is just as well. His aspirations to ‘soar’ in his studies are a fitting match for his specialty area of mechanical and aerospace engineering.

“Originally I was only going to do mechanical engineering, but then I became interested in what makes aircraft/spacecraft work. It seems to be an area of growth and looks to be pretty interesting,” he said.

Sizer would love a job one day with an aerospace company such as Boeing, but reckons he would enjoy working in any mechanical/aerospace job.

Maybe not at the farm though – only so many old aircraft can be re-engineered into useful pieces of farm machinery.

Find out more

To learn more about mathematics and engineering at UQ, view this article online at uq.edu.au/changemakers or go to eait.uq.edu.au.

Find out about the range of UQ Scholarships at scholarships.uq.edu.au.
Researchers at the Queensland Alliance for Agriculture and Food Innovation (QAAFI) are dedicated to improving the competitiveness and sustainability of Queensland’s tropical and subtropical agriculture and food sectors through high-impact science.

Conceived as a strategic joint initiative between the Queensland Government and The University of Queensland, QAAFI forges direct links with the agriculture industry that neither partner could achieve on their own.

According to Vice-Chancellor and President Professor Peter Høj, QAAFI is a stand-out generator of innovation and impact in tropical and subtropical agriculture and food sciences, and will help meet the growing global demand for sustainable, nutritious and safe food.

The Honourable Mark Furner MP, Queensland Minister for Agriculture Industry Development and Fisheries, agrees. “QAAFI represents one of the Queensland Government’s largest and most important university partnerships. Over the past nine years, we have invested in around 90 agricultural and food innovation projects that are delivering a direct positive impact to Queensland’s agricultural industries.”

QAAFI Director Professor Robert Henry is pleased with the support, noting the opening of two new research centres in 2017 – the Centre for Horticultural Science and the Centre for Crop Science – that will help build UQ and Queensland’s research and development capacity in these industries.

“Since 2009, QAAFI has received $280 million in contracts to invest in agriculture and food research, and in 2017 attracted $40 million in research income. This is reflected in the University’s high global rankings, which include first in Australia and fifth in the world in the field of agriculture.”

With the global population expected to reach eight billion by 2040, the pressure is on to feed everyone, particularly in the tropics and subtropics where more than half the world’s population lives.

For more information about the Queensland Alliance for Agriculture and Food Innovation, visit qaafi.uq.edu.au.

*Performance Ranking of Scientific Papers for World Universities 2017, rank by field.
Located in one of the few research-intensive universities worldwide in a subtropical environment, QAAFI supports UQ’s global leadership in agriculture and food science research for subtropical and tropical production systems.

Working in more than 40 countries, QAAFI has several major projects funded by the Bill & Melinda Gates Foundation (see pages 16–19), as well as many other major government and private sector grants.

QAAFI also works in partnership with key northern Australian research providers at Queensland University of Technology, James Cook University, Central Queensland University and the University of Southern Queensland to deliver solutions to the worldwide problem of food provision.

According to QAAFI Director Professor Robert Henry, an increasingly obese but undernourished population in the developed world is battling chronic illnesses caused from eating too much, whereas people in the developing world often struggle to attain enough calories a day to survive.

“Nutrition security was the theme of last year’s TropAg conference, organised by QAAFI, which attracted 720 delegates from 44 countries,” he said.

“We want to ensure that all people have access to the critical nutrients in food that support and boost core bodily functions, and provide the fuel to live a healthy and active life. The role of science is vital to meet these challenges.”

Connect with Professor Robert Henry at robert.henry@uq.edu.au.

QAAFI comprises four interconnected research centres, spanning the crop, horticulture, animal, and food and nutrition sciences; and has links and partnerships across the globe.
Institute in Focus

Research impact

QAAFI’s extensive industry linkages, globally recognised expertise, and research infrastructure across a broad range of interconnected disciplines ensure the delivery of high-impact outcomes for the tropical and subtropical agriculture and food supply chains.

The following are some examples.

Investment in sorghum

Grain sorghum is a major summer crop, produced at the moment largely as stockfeed for the Australian domestic market – although new markets for Australian sorghum are opening up in China for use in fermentation of alcoholic spirit, and in the gluten-free human food market.

Plant breeding is one of the principal factors contributing to the current upward trend evident in Australian grain sorghum yields.

The Queensland Government, along with the Grain Research and Development Corporation, and UQ, have for the past 20 years supported improvement and innovation through the sorghum pre-breeding program, which has achieved a rate of productivity gain greater than any other developed country.

Cost-benefits of the research mainly stem from yield gains, and are estimated at 2.1 per cent per year.

The pre-breeding program has licensed nearly 3000 sorghum lines to the international sorghum industry since 1989. All commercial hybrids grown in Australia incorporate genetic material originating from the sorghum improvement program.

Economic analysis of the $78.4 million investment between 1996 and 2015 shows a gross gain of $696.5 million to Australian sorghum growers.

Investment in beef

The Queensland Government, QAAFI, and Meat & Livestock Australia (via the MLA Donor Company) will invest $6.2 million between June 2017 and June 2021 to improve the genetic rate of gain of beef cattle in the northern beef industry.

The overall aim of the UQ project is to accelerate genetic gain for increasing productivity in northern Australia beef cattle herds to improve profitability of Australian northern beef enterprises. Other benefits may include reduced methane emissions, increased regional employment and incomes, and continuous improvements in animal welfare – for example, to accelerate breeding for hornless or polled cattle.

Banana biosecurity

With an annual farm gate value of around $600 million, the banana industry – located primarily in north Queensland, South East Queensland and northern New South Wales – is Australia’s largest single horticultural industry. Unfortunately, the industry is subject to serious disease events.

Since 2007, in conjunction with researchers at UQ, Queensland Department of Agriculture and Fisheries, and Horticulture Innovation Australia Limited, QAAFI scientists have delivered improved diagnostics for several key banana diseases, as well as ongoing surveillance, testing and technical capacity, and advice that has maintained (and potentially improved) industry capacity to detect and respond to disease outbreaks in the Australian banana industry.

Learn more

To find out more about QAAFI research, visit qaafi.uq.edu.au/research.
Despite their best intentions, first-time blood donors don’t always make it to their appointment.
Let it flow

First-time blood donors don’t always make it from booking an appointment to actually showing up. Professor Barbara Masser from UQ’s School of Psychology has used the power of preparation to relieve donors’ fears and boost attendance rates.

Donating blood is one of the easiest and cheapest forms of altruism possible, which is why around 600,000 Australians do it every year. However, the decision to donate can sometimes be just the first hurdle.

In 2015, Professor Masser continued a 15-year collaboration with the Australian Red Cross Blood Service on a first-time donor campaign, after noticing a concerning statistic – more than 18 per cent of first-time donors simply did not show up for their appointments. This meant that not only did the potential donation not make it to those patients in need, but also that the time and resources couldn’t be allocated to another donor in that session.

As the newly appointed Chair of Donor Research, a position jointly created by UQ and the Australian Red Cross Blood Service, Professor Masser was determined to improve that statistic, acting on a hunch that fear of the unknown was the main cause of donor absenteeism.

“People who made an appointment were obviously prepared to act, but didn’t always translate that into actual action.”

Professor Masser worked closely with the Blood Service to create a suite of communication tools that prepared first-time donors for their appointment, while at the same time boosting their confidence by explaining the appointment structure, what to expect, and how to manage possible reactions.

This simple refocus in communication was worth the investment – for a mere two per cent spending increase, the study directly increased first-time donor attendance by eight per cent. As a result, the Blood Service’s strategy now includes the donor preparation process as part of their business-as-usual communication.

Blood Service Director of Research and Development Professor David Irving says that the results are incredibly valuable.

“We now have more certainty that donors will follow up on their commitment, meaning we can manage Australia’s blood supply more effectively,” he said.

“I found the message really positive – it focused on how appreciative they were,” she said.

“Honestly, I thought it was so effective – I have it up on my wall and I just felt so special.

“I so want to donate again. The experience was really amazing.”

Professor Masser sees the ongoing collaboration with the Blood Service as a valuable platform to collaborate in future on similar research, but in other forms of body altruism.

“This area represents a true integration of basic and applied science,” she said.

“My vision is to start the conversation with world-leading researchers in other areas where people donate parts of themselves to improve the lives of others.”

In January 2018, the Blood Service conducted an analysis that showed the new strategy has had an extra benefit. First-time donors are having fewer vasovagal reactions — that is, feeling dizzy, lightheaded or faint while they donate — meaning they are more likely to donate again.

Student Georgie Groth is one donor who directly benefited from the strategy. She donated blood for the first time earlier this year and, like most first-timers, experienced some pre-donation nerves.

“I was a bit scared it was going to hurt, but mainly I was just excited to help someone in need,” she said.

Blood Service staff helped prepare her over the phone before she arrived, and sent a post-appointment brochure in newspaper-style format that congratulated her for saving lives.

“Innovative, leading-edge research is fundamental to the success of the Blood Service.”

Innovative, leading-edge research is fundamental to the success of the Blood Service.

To learn more about UQ’s collaboration with the Australian Red Cross Blood Service, view this article online at uq.edu.au/changemakers.

Connect with Professor Masser at b.mass@psy.uq.edu.au.
COMMITTED to the cause

In all his years reporting from war-torn regions across the world, Professor Peter Greste never expected that he would become the story.

But his life changed forever in 2013 after he and Al Jazeera English colleagues were arrested while on assignment in Egypt.

Charged with threatening national security, Professor Greste spent 400 days in prison and unwittingly became the centre of an international media storm and a global face in the fight for press freedom.

“Being the subject of the story was odd. I have always been the storyteller and not the story. But I recognise that my story itself is interesting to people, and that if people can learn about press freedom because of it, then I will tell my story,” he said.

Since his release, Professor Greste has used his platform to fiercely advocate for freedom of the press. According to Freedom House, press freedom globally has declined to its lowest levels in 13 years as a result of increasing threats to journalists. To Professor Greste, that is deeply troubling.

“In the war on terror, governments have seen licence to define national security and terrorism so broadly that, in a lot of cases, it’s actually had the effect of silencing press freedom. And in the process, damaging the way in which democracy works.

“If we keep silencing the press, keep limiting the work that journalists are able to do, and keep creating blind spots that journalists can’t look into, then we create opportunities for things to go wrong and for bad stuff to happen. I feel very passionate about maintaining that pressure. We should be moving forward on this, not backwards.”

While the 24-hour news cycle has allowed more news to be placed into the public discourse than ever before, Professor Greste believes that it has also brought about a lack of verification and, ultimately, a decline in journalistic standards.

“One of the problems is that in this digital world, we have so many sources of information that we have the illusion of being well-informed – but quantity isn’t the same as quality. You cannot have a strong democracy without strong journalism.”

Australia is currently ranked 19 out of 180 countries in the World Press Freedom Index, but that is not to suggest our nation hasn’t had its challenges. As Professor Greste explains, threats to investigative journalism and to whistleblowers are making it increasingly difficult to hold politicians to account.

“I recognise that the media itself has a lot of work to do to recover public trust. But we have a responsibility to be informed about what politicians are doing in our names. The means through which we traditionally understand what is being done is through the media – by constantly investigating, challenging and questioning the work that politicians and civil servants are doing on our behalf.

“A lot of that is quite open and quite transparent, but a lot of the uncomfortable stuff tends to get squirreled away. And that’s why we need robust press, so that we can understand what is taking place.”

Now working in the role of UNESCO Chair of Journalism and Communication at UQ’s School of Communication and Arts, Professor Greste hopes to give the next generation of journalists some of the benefit of his extensive experience.

“This role means I can speak to journalists and journalism students and share some of the lessons I have learnt. And I want to remind journalists about why the job matters and, hopefully, inspire them to really drill down and do that job with passion and commitment.

“If I could pass on any advice, I think I would say to be fearless in reporting. Cover what you believe in, rather than what you feel you should, or what other people think you ought to cover.”

Connect with Professor Greste at p.greste@uq.edu.au.
Journalists of the future need to be multiskilled and, according to Professor Jason Jacobs, Head of the School of Communication and Arts, UQ’s Bachelor of Journalism is designed to prepare students for success across all media.

Journalism students begin by building a solid foundation in the fundamentals of journalism, which includes investigative methods, story design and production techniques. The program then extends these skills by offering advanced training in foreign and in-depth reporting, design thinking, and data journalism.

“Broadcast industry experts teach our courses at UQ in audio, video and multimedia reporting and production. The focus is on developing the full suite of skills required of today’s cross-platform journalists,” Professor Jacobs said.

“These include the ability to research deeply and write well, but just as importantly, to know how to use the latest equipment and technologies to produce elaborate and engaging stories for any media.”

In continuing its commitment to the study and practice of world-class journalism, UQ welcomed high-profile foreign correspondent Professor Peter Greste to the School of Communication and Arts as the UNESCO Chair of Journalism and Communication in January this year. In this role, Professor Greste will help guide the future of journalism education through a range of teaching, research and engagement activities.

“I’m incredibly excited to have joined UQ to pass on some of what I’ve learnt over the years to the next generation of journalists,” Professor Greste said.

“With the University’s incredible research capacity and the platform that the UNESCO Chair of Journalism and Communication gives me, I am also looking forward to using those resources to help shape the future of an industry that is so vital to a functioning democracy.”

Work Integrated Learning (WIL) is a key part of the program, with students given the opportunity to undertake industry placements and fieldwork programs. Former foreign correspondent, and senior producer for the ABC and the Canadian Broadcasting Corporation, Bruce Woolley is project manager for the WIL fieldwork programs, and is a UQ lecturer in journalism.

“Our practice-based WIL courses in journalism at UQ include, but go much further than, traditional internships and work experience opportunities. Those, of course, are essential to paving the way for journalism students to build rich and vital careers, and even to reinvent the industry itself,” Mr Woolley said.

“But so too are UQ’s innovative WIL courses that include International Field Reporting in Vietnam, India and Indonesia, where final-year students learn what’s required to rise to the very top of the profession – as foreign correspondents.”

UQ Bachelor of Journalism/Arts (International Relations and Peace and Conflict Studies) student and inaugural Clare Atkinson Memorial Scholarship winner Chantelle Bringas was one of 15 students chosen to participate in the UQ in Jakarta field reporting course in April 2018. She says that the experience not only strengthened her ability to produce quality cross-platform content, but also raised her confidence and provided her with a new network of friendships internationally.
“The opportunity to work in Jakarta not only expanded my practical journalism skills, but also solidified my career goal to delve into foreign correspondence and one day transfer into war correspondence,” Ms Bringas said.

“One of the most prominent lessons I learnt was to be flexible with scheduling, including the need to be perceptive and carry an open mind when immersing myself into a rich, but starkly different, culture. I learnt that producing and pinning down interviews is often much harder overseas, and yet it only enriches the content of the stories you create.”

According to Mr Woolley, the WIL program is an excellent example of a ‘signature pedagogy’ – or a course that teaches journalism students how to think and perform like the highly qualified practitioners they intend to become. These programs are generously funded by the Australian Government’s New Colombo Plan and supported by partners at Amity University in India and Universitas Indonesia in Jakarta.

“The experiences they have while overseas, and which they reflect on deeply as part of their assessment, form the talking points in job applications that will set them apart from most other candidates,” he said.

“Our recent graduates have had considerable success in 2018, winning sought-after cadetships at ABC News, SBS News and ABC Rural in Queensland. They really have proven they can do it all, and employers have noticed.”

Find out more

Learn more about UQ’s journalism courses at future-students.uq.edu.au/study.
The ‘glass cliff’ phenomenon is finally coming under scrutiny.
Precarious paths

In 2017, the term ‘glass cliff’ became mainstream after it was shortlisted for the Oxford Dictionary’s 2016 Word of the Year.

UQ’s Professor Alex Haslam coined the term ‘glass cliff’ in 2005 with University of Exeter researcher Professor Michelle Ryan. While honoured by this recognition, he is just glad that the phenomenon, which has been prevalent in boardrooms, court rooms and politics for far too long, is finally coming under scrutiny.

Women who progress to the highest echelons of leadership can suffer from being placed on a ‘glass cliff’ – that is, women are more likely to be appointed to leadership positions in problematic organisational circumstances, making their status and job security more precarious than their male counterparts.

Professor Haslam has spent over a decade researching this phenomenon with colleagues from around the world.

“The evidence that women tend to be appointed to sub-optimal leadership positions in business is now pretty incontrovertible,” he said.

Women surveyed during his studies cited issues like in-group bias and sexism as the cause of the phenomenon, and many believed that limited career opportunities relative to their male counterparts led to women accepting precarious leadership positions.

Professor Haslam, together with Professor Ryan and Dr Julie Ashby from the University of Exeter, also explored whether the phenomenon existed in fields outside of business.

Perhaps unsurprisingly, they discovered it occurred in the legal industry and in politics, where they found that female candidates are more likely to contest an unwinnable seat or take on a difficult case than their male counterparts.

While acknowledging its existence is a great initial step to addressing the glass cliff, Professor Haslam now wants organisations to stop it from occurring in the first place by auditing themselves to see what meaningful development opportunities and career paths are offered to women.

Women are more likely to be appointed to leadership positions in problematic organisational circumstances, making their status and job security more precarious than males.

“This can be a struggle for many organisations, because they have often invested pretty heavily in the process of defending themselves against accusations of bias, for example, by having various diversity policies in place.

“In our experience, audits tend to uncover a range of inequalities – some subtle, others not. Having done one, you can set about trying to correct inequalities, preferably in consultation with both women and men, so that people understand what you are trying to do and why.”

To take this advice on board and provide an inclusive environment where diversity thrives, UQ is proactively supporting women to reach their leadership potential and offers a range of professional development and mentoring programs, flexible working arrangements, generous parental leave, convenient parking for pregnant and breastfeeding women, and parenting rooms to make the transition back to the workforce a positive one for new parents of both genders.

UQ is also one of 40 Australian organisations participating in the SAGE Pilot of Athena SWAN program, a UK-based model that applies a rigorous evaluation and accreditation framework to improve gender equity in the science, technology, engineering, mathematics and medicine (STEMM) disciplines.

Professor Haslam says that while these initiatives lay the foundation for positive change, more research and consultation is required to make real progress.

“I think there is quite a bit of evidence that the research has already had a lot of impact, but we want to find out more about how barriers to progress can be overcome collectively, in ways that make sense, and are appealing, to both men and women,” he said.

To learn more about how UQ is helping enhance equity for staff, view this article online at uq.edu.au/changemakers.

Connect with Professor Alex Haslam at a.haslam@uq.edu.au.
Adventure Out Loud founder and UQ graduate Nate Taiaroa.
African adventure

From climbing the corporate ladder to climbing Mt Kilimanjaro, Adventure Out Loud founder Nate Taiaroa has certainly taken ‘the road less travelled’, but the journey has enabled him to determine exactly what he wants from life – keeping disadvantaged African children in school – and how his skills can best be applied to achieve this goal.

“Having spent much of my youth as a successful entrepreneur (selling farm produce), I applied to study business management at UQ with the aim of being a high-flying CEO,” he said.

“But things changed along the way. After completing a Bachelor of Commerce in 2009, which included a 12-month stint in a highly coveted Ernst & Young (EY) internship program, I was all set for a corporate career in accounting.

“Returning to EY after university, for the next three years, under the guidance of some incredible managers and mentors, I excelled professionally. By the age of 24, I was one of EY’s youngest managers and, while my career ambitions were starting to change, I really enjoyed the responsibility EY had entrusted me with.”

However, in 2012, Mr Taiaroa’s 12-year-old step-brother died, and this experience made him realise that life was too short to keep chasing a career he wasn’t truly passionate about. Selling everything he owned in Australia, he moved to Tanzania, East Africa, and spent the next 16 months living and volunteering at a charity school called the School of St Jude.

“This was a time of transformation for me and, reflecting on the experience now, I realise it gave me the time I needed to grow as a person and figure out what I wanted from life. More importantly, it gave me time to have fun and be me.

“At the end of my time in Tanzania, I realised that I was extremely passionate about keeping disadvantaged children in school.”

Spending the next year travelling around Africa, the Middle East and Europe, Mr Taiaroa worked on the concept of creating a social enterprise that inspired people to make a difference in the world through adventure travel combined with a charity component.

“I’d led tours in East Africa before and knew I had the skills to intimately connect travellers to community and culture, opening up unique experiences they usually couldn’t access. I also knew that leading tours was something I loved doing and that in the process of creating authentic travel experiences for Australians, I could inspire them to sponsor disadvantaged students through school as part of their travel package – making Africa a better place to both live in and travel,” he said.

“At the end of my time in Tanzania, I realised that I was extremely passionate about keeping disadvantaged children in school.”

In late 2015, Mr Taiaroa started Adventure Out Loud. Despite having little to no idea about running a travel company, he knew he had the skills, experiences, determination, resilience – and mentors – to work it out.

“I knew that the unique experiences we proposed would make our adventures more authentic and ultimately enhance our customers’ travel experience. To date, our customers agree – with many rating the charity component the same or higher than Kilimanjaro or the safari.”

So far, Adventure Out Loud has been able to sponsor more than 100 disadvantaged students, which gives Mr Taiaroa the peace of mind to focus on voluntary work in his spare time.

“I am a director for a charity in Kenya called the Mirror of Hope, which empowers vulnerable children and women living in Africa’s largest slum through a range of education and micro-finance initiatives.”

He is also the co-founder of a youth movement in Melbourne, Youth Out Loud, a not-for-profit entity that is by youth, for youth. Its primary objective is to empower young people to solve youth issues through changing the way they think, by:

• connecting them to community
• developing respectful relationships
• teaching them to take responsibility for their actions, thoughts and outcomes.

Mr Taiaroa agrees that he would not have been as successful in establishing all his social enterprises without the skills he learnt at UQ and EY, and is now keen to share his knowledge by giving guest lectures at UQ Business School. And it works both ways.

“Reconnecting with UQ has created a number of new networks and some exciting opportunities for me; and in April, a UQ intern joined the Adventure Out Loud team.”

For more information about Adventure Out Loud, view this article online at uq.edu.au/changemakers.

Connect with Nate Taiaroa at nathan@adventureoutloud.me.
Can’t get enough?

The UQ ChangeMakers podcast series tells the stories of the most influential members of the UQ community.

From incredible discoveries and groundbreaking research to inspiring leadership and innovation, listen as we get to know our amazing change makers and find out what makes them tick.

Listen, subscribe, rate and review.

uq.edu.au/changemakers/podcast