



Tertiary
Teaching
Excellence
Awards
2019

Celebrating outstanding
educational leadership



Ngā Tohu
Whakaako
Whakahirahira
2019

E whakanui ana i te ārahitanga
mātauranga whakahirahira

2019 Awardee Profiles



Celebrating outstanding
educational leadership

Ako Aotearoa has been managing the Tertiary Teaching Excellence Awards since 2007 and we are immensely proud of the role we play in celebrating and sharing outstanding teaching and learning practice. With the Awards now in their 18th year, the brand has been modernised to better reflect its position as a prestigious awards programme in Aotearoa New Zealand.

The dual lines inside the new logo's koru shape are reflective of the Kaupapa Māori principle 'Ako' and its reciprocal relationship between the teacher and the learner. This also intentionally connects the new logo with the Ako Aotearoa brand, launched in November 2017.

The new strapline – celebrating outstanding educational leadership / E whakanui ana i te ārahitanga mātauranga whakahirahira – reflects Ako Aotearoa's drive to widen the inclusivity and diversity of these awards; acknowledging that educational leadership involves teaching and training wherever it occurs across Aotearoa's tertiary landscape.



E whakanui ana i te ārahitanga
mātauranga whakahirahira



Hon Chris Hipkins
Minister of Education

Foreword

Kia ora koutou katoa,

Awards season is one of my favourite times of year. It's when we acknowledge some of the extraordinarily talented individuals working throughout education in this country, and the great teaching practices they contribute. It's a real pleasure to again have the opportunity to write a few words to introduce this booklet, which profiles the finalists in the 2019 Ako Aotearoa Tertiary Teaching Excellence Awards.

They come from a range of institutions across the country and represent disciplines as diverse as Māori art history and kaupapa, engineering, computing and geography. What they share is an unwavering commitment to excellence and to equipping their students with skills and understanding to help them thrive as they move through their lives and careers.

I'm particularly pleased to see the awards becoming inclusive and representative: for the first time one of our colleagues from a wānanga is a finalist. This acknowledges the excellent teaching taking place in wānanga, as well as the importance of diversity across the tertiary education sector. This diversity, and a focus on learners, are at the heart of this Government's vision for ensuring that all New Zealanders have access to quality education and training throughout their lives.

As always, a big thank-you to Ako Aotearoa, not just for making these awards happen but for your tireless work in helping our educators be the best they can be. Without high-quality teaching there can be no educational success: the future of the country literally depends on it.

A word, too, about the new brand for the Tertiary Teaching Excellence Awards, which you will see throughout this booklet. The dual line in the motif nicely captures the principle of Ako, the two-way relationship between teacher and learner. It's a nice illustration of all that's best in teaching, and of the special ability that this year's finalists all possess to place the student at the centre of everything they do.

Ngā mihi nui,

Hon Chris Hipkins
Minister for Education



Prime Minister's
Supreme Award
and
Sustained Excellence
in Tertiary Teaching
General Category

Andrew Eberhard

Business School
The University of Auckland

"I love helping students who are struggling to reach that 'Aha!' moment when they finally climb out of the pit of learning and exclaim 'I've got it!'"

Andrew Eberhard has taught over 20,000 students in the last decade. He is known as an engaging and motivating teacher who cares deeply about his students. His innovative teaching and personal talent bring out the best in both struggling and talented students alike and inspires best practice in his colleagues.

In 1994, Andrew became the first person in his family to attend university. He thrived in the environment at the University of Auckland, became a Tutor in Information Systems in 2000, later a full-time Senior Tutor and then a Professional Teaching Fellow (PTF) – one of the first in the University – in 2011. With its emphasis on teaching innovation and dissemination, this role fits his practices and priorities well, and his impact extends from his own faculty to across the university and beyond. In 2018, he was promoted to Director – Business Masters Programmes in the Graduate School of Management, where he oversees more than 60 courses a year.

Since becoming a PTF, Andrew has also been involved in many teaching service roles. He was the curriculum director for the university's new Business Analytics major, helped to pilot a new learning management system – Canvas, has served on many committees and project working groups, and was the first PTF elected to the University Senate.

During his time teaching in the University of Auckland Business School's Department of Information Systems and Operations Management (ISOM), Andrew has contributed to courses such as Database Applications, Business Productivity Tools, Information Systems Technology, Accounting Information Systems, and Business Systems.

"I am passionate about finding ways of enhancing student learning in large classroom settings and supporting my colleagues to manage teaching at scale."

The most challenging but rewarding course of Andrew's teaching career has been teaching the large INFOSYS110 Business Systems course (1,000+ students per semester), which is compulsory for all undergraduate students in the Business School. When he took the course on, it had a poor reputation – students thought it would be too technical and boring, especially as most of them were new to university study and many were international or first-in-family students. Andrew helped introduce a series of operational and pedagogical innovations to enhance student learning and improve student feedback, transforming student perceptions of Information Systems.

"Excellent teaching in Information Systems is about motivating students to take a lead in discovering and exploring the field."

Andrew's approach to teaching excellence involves captivating and engaging students (giving them examples which make them marvel about technology), connecting with them (making the subject come to life), cultivating their passion for the subject, and capacity-building (disseminating innovations and good teaching practice to enable colleagues to improve their teaching).

He has been successful in engaging large numbers of students – often in lecture rooms holding around 550 students – by developing both in-class and outside-class activities. Although he uses very little technology in class, he makes extensive use of it to engage students outside of the classroom.

For in-class activities, he uses compelling stories, such as videos, which he opens for discussion and links to the underlying principles, theories and technologies of Information Systems. He captivates students by making the underlying technology seem real, sometimes bringing in physical artifacts, rather than just using imagery, and weaving a story from his past into the content. Outside-class activities used to engage students include providing prompt and meaningful feedback on assessment for students, usually via screencast.

“This approach allows me to be rigorous and critical without undermining their confidence. They can hear from my tone of voice that the feedback is intended to help them improve. Nuance and tone are often lost in typed feedback.”

As using video is not always possible, Andrew piloted CrowdMark in INFOSYS 110 and helped roll it out across the rest of the University. This is a collaborative online grading and analytics platform that allows grading to be done anywhere and anytime. It makes it possible to mark and release (with feedback) 1,000 scripts over a weekend. Andrew also uses Piazza, an online gathering place where students can ask, answer, and explore questions under the guidance of teaching staff. He encourages students to draw upon their personal experience to construct knowledge, which he believes is best gained through building things that are tangible and sharable.

Helping struggling students is one of Andrew's passions, as he understands the many reasons they may find university study difficult, and he has received a fellowship to support his work in identifying, supporting and mentoring 'at-risk' students. He cultivates talented students' passion for information technology by leading competitions, such as the University of Auckland Microsoft Imagine Cup programme, which provides opportunities for students across all disciplines to team up and create applications, games and integrate solutions. He also coaches students in challenges, such as Velocity, the UoA entrepreneurship development programme.

Andrew believes in sharing knowledge and empowering his colleagues. He helped to design, develop and implement an Educational Technology Hub for the University of Auckland staff and helped establish a self-service video recording tool, the One Button Studio, as a useful tool for the wider University.

Andrew's teaching awards include Faculty Teaching Excellence Awards in 2011, 2012, 2015, 2016 and 2018, University Teaching Excellence Awards in Innovation in 2012, and Leadership in 2018, and a Senior Fellowship of the Higher Education Academy in 2018.

“I feel fortunate to have a job I love and the opportunity to make a difference.”



Sustained Excellence
in Tertiary Teaching
Kaupapa Māori Category

Dr/Tākuta
Ngarino Ellis

Art History
The University of Auckland

“I see my classroom presence, my culture and the values of my tīpuna, as hallmarks of my teaching. I like to think that students see me first and foremost as a Māori academic, and my pedagogy as one which is clearly located in the reo, tikanga and mātauranga of Aotearoa New Zealand. Knowledge is aspirational and achievable for them all.”

As Senior Lecturer in Art History at the University of Auckland, Ngarino Ellis is currently the only Māori art historian holding a permanent teaching position in a New Zealand university. And she teaches in one of only three art history departments in New Zealand. Her inspiration comes from Professor Ngahuia Te Awekotuku who, in 1988, was the only Māori art historian teaching the first-ever university-level Māori art history course, when Ngarino enrolled as a new student. Now, Ngarino is at the forefront of ensuring Māori art is recognised in Aotearoa New Zealand and internationally.

“Just as Ngahuia mentored me, I feel particular responsibilities to Māori and Pacific students. I strive to identify and celebrate their worldviews and aspirations using the language and culture of this land, but do so in ways that I believe enriches the education of all my students.”

Ngarino’s teaching is deeply rooted in Kaupapa Māori practice, and grounded in her upbringing in a close-knit, strong whānau who spent much time on their marae. The values instilled by her grandparents shape her life and are at the core of her teaching practice, which is anchored in manaakitanga/care and rangatiratanga/empowerment. Her goal is to help students feel that Art History is their discipline, and see that being Māori – or knowing about the Māori world – is critical to their on- and off-campus lives. She is keenly aware that university study may be alienating for new students, including many Māori, Pacific and first-in-family students.

Ngarino fosters the study of Māori art forms and practices using Te Ao Māori frameworks. Her teaching is innovative, combining a Kaupapa Māori pedagogy with concepts drawn from Euro-American Art History and the ideas developed in her own research. She lectures in five courses – Global Art Histories; Art Crime; Gender, Ethnicity and Visual Culture; Mana Taonga: Tradition and Innovation in Māori Art; and Exhibiting Cultures.

When she first started teaching the new postgraduate Museum Studies core course in 2013, Ngarino discovered that, while she was teaching students about the importance of indigenous perspectives, 60-70% of the readings came from authors from outside those communities. Deciding to shift her approach, she sourced indigenous-authored texts, resulting in a paper, which she presented at the Native American conference in Denver in 2013, receiving much acclaim.

“My pedagogy is aimed at Māori students first and foremost. They are a small group on campus, subject to unique pressures. Every academic needs to work for Māori student success and actively engage with

expectations under Te Tiriti o Waitangi, but the responsibility is keenly felt by Māori academics. The presence of Māori academic role models and courses with significant Māori content is critical to Māori student success.”

Ngarino believes in providing culturally-appropriate learning environments, ensuring that students feel welcome and culturally-supported when dealing with sensitive issues. She believes that diverse spaces foster diverse learning, so her classes often meet in the University’s meeting house, Tane-nui-a-Rangi, or the Auckland Museum. But, as most classes are held in lecture rooms, Ngarino achieves a more dynamic learning space (“activates the classroom”) by arranging classes into 15–20 minute blocks, which include a break, where students look at images, talk together, or participate in activities. She also sees teaching as a “performative act”, where students come to class expecting the unexpected and leaving with new knowledge and a thirst to pursue ideas presented in class. She loads follow-up material to Canvas (the Learning Management System), including audio-visual resources and podcasts.

Many of Ngarino’s class activities are based on the pedagogy of ‘learn by doing’, advocated by the photographer Hulleah Tsinhnahjinnie (Seminole–Muscogee–Navajo). These include ‘The Blank Map’, ‘Taonga mo ngā tangata katoa – Treasures for everyone’, and the ‘International War Crimes Tribunal’.

Ngarino has disseminated her practice as a teacher at a range of indigenous and art history conferences. These include:

- 2019 Teaching Museums Studies in Aotearoa New Zealand – Museums Aotearoa Conference, Wellington;
- 2018 He maunga teitei: Teaching Māori Art as a Baseline for Art History in Aotearoa Today – New Zealand Art History Teachers Association, Auckland;
- 2017 Roundtable: What’s a Māori to do? Teaching and Innovating Māori History in the Turbulent Present with Aroha Harris and Hirini Kaa – New Zealand Historical Association Conference, Christchurch;
- 2016 What is Māori Art History? – Art Association of Australia and New Zealand, Canberra;
- 2016 Plenary: Why I don’t come to conferences like these – Art Association of Australia and New Zealand, Canberra;
- 2013 Kia ora te whānau! Going global with Māori Art History – Native American Art Studies Association Conference, Denver.

Her current book project, *Toi Te Mana: A History of Indigenous Art from Aotearoa New Zealand* (with Deidre Brown and Jonathan Mane-Wheoki), is grounded in her teaching. In her courses she has developed a core set of Māori terminology and frameworks to conceptualise disparate time, people and places, in the process identifying critical parameters for Māori Art History, and for the wider discipline. Māori Art History, she argues in her teaching and research, has much to contribute to Art History as a discipline.

“The values instilled by my grandparents shape my life and are at the core of my teaching practice. My teaching is informed by this inheritance and a living Māori pedagogy, infused by Kaupapa Māori methodologies, my upbringing in a close-knit whānau (family), and exposure to passionate teachers including Ngahuia Te Awekotuku (Art History), Jane Kelsey (Law), and Judith Binney (History)”.



Sustained Excellence
in Tertiary Teaching
Kaupapa Māori Category

Ahorangi Tuarua Mera Penehira

Associate Professor

School of Indigenous Graduate Studies
Te Whare Wānanga o Awanuiārangi

“One of the most important aspects to being a kaupapa Māori teacher and academic is to share my world, open doors, and support students to make connections with others who can further support their teaching, learning and research.”

Mera Penehira (Ngāti Raukawa, Rangitaane and Ngai Te Rangi) believes excellence in kaupapa Māori teaching and learning centres on students in the context of whānau, hapū and iwi as these represent the fundamental societal structure of Māori, as well as the communities that kaupapa Māori students serve.

“To embody the notion of ako is to also understand that I am both an educator and a learner every time I engage with students.”

As a kaupapa Māori teacher, Mera engages in critical, cross-disciplinary, cross-nation and multi-generational research, teaching and learning. She says this requires humility, confidence and an openness to learning new things. Her commitment to respectful relationships and excellence at all levels is central to her engagement with students. She says the notion of ako is intrinsically linked to kaupapa Māori.

Mera believes that key to understanding the complexities of kaupapa Māori in education is being politically aware, astute and active. She challenges students to do likewise, developing a level of critique that ultimately results in transformative praxis and meaningful change for them and communities alike.

Underpinning Mera’s teaching is Mātauranga Māori and/or Mātauranga ā Iwi (Māori and Iwi-centred knowledge), which enhance both learning and the experience of it. The Mana Kaitiakitanga Framework, an expansion of Kaupapa Māori theory that she developed within her doctoral research, has been pivotal to her approach to teaching and learning. She has used this framework as a teacher working within Aotearoa and other nations with a range of different Native and Indigenous peoples.

She also incorporates in her teaching the two Māori and Indigenous wellbeing courses she has developed – Māori and Indigenous Wellbeing, University of Auckland, 2013 and Native and Indigenous Spirit and Wellbeing, Te Whare Wānanga o Awanuiārangi, 2018. She has taught kaupapa Māori research methodologies at the University of Auckland – Research Methods in Māori Education 2013–2017 – and has encouraged and supported students to develop their own kaupapa-ā-iwi (iwi-specific) research methodologies throughout her masters and doctoral supervisions in her academic career.

Mera asserts that kaupapa Māori is an indivisible culmination of te reo Māori (Māori language) and tikanga Māori (customary practices and protocols); they accompany each other and each component adds depth and understanding to an appreciation of Te Ao Māori. She has taught

these throughout her teaching career, first as a kōhanga reo teacher and later to total immersion classes in pre-service teacher training.

In her role as an Associate Professor in the School of Indigenous Graduate Studies at Te Whare Wānanga o Awanuiārangi, Mera is responsible for leading the International Indigenous Doctoral Programme with students based at the University of Washington, Tacoma, University of Hawai'i Maui College and the Waikato-Tainui College. She oversees doctoral education, as well as maintaining tribal authenticity with students, travelling four times a year to run wānanga with five doctoral cohorts. This appears to be the only such programme in the country. It is within these spaces that she combines Native and Indigenous theories and teaching approaches.

Mera uses her research to inform her teaching. She has developed and taught many new kaupapa Māori courses in universities and at wānanga. As Director Postgraduate Studies in Te Puna Wānanga (TPW) for four years (2014-2017), and more recently Director Research, she was largely responsible for the development of the postgraduate programme in the school as both student and staff mentor.

“Teaching excellence in the frame of kaupapa Māori requires both community presence and commitment to working alongside and uplifting others.”

Mera's role includes formal mentoring, such as staff presentations at kura and in the workplace, and daily incidental mentoring, such as meetings with kaiako, check-ins with wānanga colleagues, reviewing co-worker presentation outlines, and supporting new and emerging researchers in developing research proposals. She also enhances the understanding of kaupapa Māori in the community by online presentations and media appearances.

Whanaungatanga – developing and maintaining strong relationships – is a cornerstone of Mera's teachings. One example is her involvement, as the co-academic leader at the Universities of Auckland and Waikato, with the MAI (Māori and Indigenous doctoral programme). The MAI programme arose in response to institutional barriers and the resulting inability to work successfully with Māori and Indigenous students at the doctoral level. Mera's work included connecting over 120 doctoral students by way of writing retreats, monthly academic workshops, conferences, seminars and a Facebook group. The programme has been considered such a success that it was duplicated in Canada.

Manaakitanga – respect and support for learners, colleagues and communities – is also integral to Mera's teaching practice. She is particularly moved by the research of other indigenous peoples and nations and how this impacts positively on work done in Aotearoa. She has shared manaakitanga at longhouse gatherings in Washington State, the ohana celebrations on the 'aina in Maui, and participated in the campus communities of universities overseas.

Mera has been active in publishing and research over the past decade. She has studied Māori and indigenous education and wellbeing, traditional knowledge and healing, sexual health education and mana wahine advancement and politics. Her research awards include a Wharekura International Exchange Grant from the University of Auckland, the prestigious Hohua Tutengaehe Research Doctoral Fellowship in Māori Health from the HRC, and a three year Postdoctoral Fellowship. She has recently been awarded the Prime Minister's Scholarship for Asia, the first time a wānanga has received such an award. Ten students and academics will be funded to attend a 6-week Indigenous Health and Entrepreneurship Opportunities – Ayurveda and Rongoā Māori programme.

“For me, kaupapa Māori is not merely an opportunity to have a teaching career, but it is a way of life that I have fully embraced.”



Sustained Excellence in Tertiary Teaching General Category

Peter Bier

Department of Engineering Science
The University of Auckland

“I bring dynamism, energy and enthusiasm to my teaching, blending relevant real-world examples, live demonstrations, problem-solving, and active learning tasks to create an engaging learning environment.”

Peter Bier defines teaching excellence as “teaching dynamically” – inspiring students to learn by sharing his passion, energy and new ideas on engineering. He constantly strives to improve his teaching, learn from colleagues and share his experiences. He aims to engage and support all of his students, whatever their learning background or interest in the subject matter. To sustain energy and introduce humour into his teaching, he introduces the element of performance, using it to demonstrate abstract concepts and deepen understanding.

As a Professional Teaching Fellow in the Department of Engineering Science at the University of Auckland, Peter teaches engineering courses, including Mathematical Modelling 1 and 2 and Introduction to Engineering Computation and Software Development, which teach around 1,000 students difficult, but necessary, conceptual and technical content. He also teaches smaller classes, including Accelerated Mathematics, a stage one mathematics course aimed at very able secondary school students.

“I want to take students from ‘where they are’, to ‘where they need to be.’”

As coordinator of two large stage one courses, Peter puts considerable effort into smoothing the transition from secondary to tertiary study for his students. To gain more insight into the knowledge students bring to university, Peter volunteered to teach the year 13 calculus differentiation standard to students at Mt Albert Grammar in 2010. To keep in touch with what is happening in the secondary sector, he has also been a regular attendee and has presented at the biennial NZ Association of Maths Teachers secondary teachers’ conference.

Aware that New Zealand’s economy depends on a steady flow of engineering graduates, Peter’s role includes ongoing outreach to secondary schools. He helps promote secondary student interest in STEM (Science, Technology, Engineering, and Mathematics) subjects via the nationwide NZ Engineering Science Competition, which he has run for the last ten years. This competition attracts around 200 teams, giving students the chance to grapple with real-world mathematical modelling.

In order to identify gaps in first-year students’ knowledge during their first week of study, Peter moved the existing paper-based diagnostic test online to facilitate rapid feedback. To provide support for at-risk students, he led the development of a manual, which outlines practice problems, and video tutorial resources. As well as co-coordinating drop-in clinics for one-to-one assistance, he also uses multi-choice questions as a way of polling student understanding, enabling him to check and adjust his teaching.

Peter has a special interest in the success of Māori and Pasifika students, who represent around 10 percent of the student cohort, as many may have experienced barriers to entering engineering studies, such as lack of access to, or support with, the necessary subjects at school. He played a key role in the creation and delivery of his faculty's Genesis Programme, which identifies Māori and Pasifika students who would not normally be able to enter the engineering programme, but who show the potential to succeed. These students are offered an intensive academic programme to enhance their mathematical knowledge and learning skills.

"A good story can serve as a great introduction to a problem while also providing the motivation for why we care about a particular concept or topic."

Peter finds engaging students is easier when he shows enthusiasm for their learning and passion for the material taught. He uses body language and movement to supplement verbal and written communication. His teaching uses real-world stories, practical examples and live demonstrations to create memorable learning experiences. For example, he uses juggling to illustrate the mathematics of motion, climbing stairs to calculate slopes, and an umbrella to demonstrate an enclosed volume.

Another essential feature of Peter's teaching is modelling problem-solving, using relevant examples and clear explanations. As engineers do not solve problems by writing PowerPoint slides, Peter uses "messy" working, with hand drawn equations and diagrams, for modelling in class. For students who have difficulty working a problem live in lectures, Peter offers lecture recordings and is working on providing supplementary video material.

To make sure "things stick", Peter ensures students have plenty of active learning exercises – working on problems individually or via group discussions. Outside of lectures he designs weekly formative activities such as assignments, labs, quizzes, tests and tutorials, which often count towards students' final grades. He believes that well-designed assignments are excellent for practising skills, but need to be accompanied by fast feedback. He created weekly worksheets that are assessed by way of an associated online quiz. Immediate feedback is given, enabling students to fix misconceptions early before moving on to other areas. In 2011, he was one of the first New Zealanders to trial Piazza, a software tool dedicated to running class fora, which ensures a responsive and collaborative learning environment.

Group projects provide another way for students to practise large-scale, more complex problems and evaluate their solutions. In 2012 Peter trialled a day-long group project, the results of which were later presented at the Australasian Association of Engineering Education conference.

As a recognised advocate for the development of good teaching practices, Peter has presented at numerous training sessions, workshops and conferences and has participated in working groups and committees. To continue to be a dynamic teacher, he explores new ways to improve his teaching. For example, he enrolled in an advanced stage one physics course to experience a flipped-classroom environment, learning alongside other students. His insight into the students' perspective has convinced him to incorporate this model into his own teaching.

"Dynamic teachers do more than show and tell. They foster a love for the subject and a life-long love for learning."



Sustained Excellence in Tertiary Teaching General Category

Andrew Luxton-Reilly

Associate Professor
School of Computer Science
The University of Auckland

“For me, excellent teaching is about sharing my passion for computing, stimulating curiosity and conveying to students why Computer Science matters through its enormous capacity to improve the world.”

Andrew Luxton-Reilly's slightly unusual pathway to teaching computer science (CS) led him to become an outstanding teaching force at The University of Auckland and beyond. As an undergraduate studying an eclectic range of subjects, he failed several courses due to poor study habits. But, through his BA and MA (Hons) in Philosophy, he became more interested in contributing to society and thinking critically about the influence of ideas on society. He also completed a BSc in Computer Science and, in 1994, while completing his MA, joined the Computer Science Department, now the School of Computer Science (SoCS), as a teaching assistant. He became a Tutor, then a Senior Tutor and, after completing a PhD, shifted to a more traditional research and teaching role as a Senior Lecturer.

Over his 24-year career, Andrew has taught high school students, adults engaged in continuing education, undergraduates and graduates, with class numbers ranging from three to 850. He has supervised 10 PhD, seven Masters and 50 Honours students. He has been awarded 10 University learning and teaching grants for innovative approaches to teaching and learning which have helped support the refinement and evaluation of peer learning systems such as PeerWise and Aropä that are now widely used by an international audience.

Excellent teaching goes hand-in-hand with enjoyable learning.

Andrew says excellent teaching is about sharing his passion for computing, stimulating curiosity and conveying to students why CS matters through its considerable capacity to improve the world. He aims to help students learn effectively, be self-reflective about content knowledge and professional behaviour, and be aware of the connections between the digital world and the social world.

He believes computing educators should take a holistic view of the discipline and ensure students are connected to people and society. As the technology they develop has a profound effect on our future, they should be able to communicate effectively and have an appreciation of ethics and social justice. The two main principles that underpin Andrew's teaching practice are scaffolding the acquisition of knowledge and basing his teaching on a continuous cycle of research-informed, critical reflection.

As CS is highly technical, precise, and rapidly changing, students have to develop a wide range of competencies, especially as they have differing levels of prior experience. Andrew also ensures students are aware of gender equity issues, bias, negative stereotypes, and perceptions of identity. He acknowledges the discipline is plagued by negative

stereotypes and implicit bias. (CS has the worst gender equity of any subject, with less than 20 percent of CS students being women).

Andrew's main aim is to motivate his students, believing they learn best when they are actively seeking knowledge rather than 'jumping through hoops.' He regularly promotes engagement through activities involving peer learning, which improves social interaction and communication skills and gives students the opportunity for immediate feedback. He also motivates curiosity by provoking cognitive dissonance, such as using an example that demonstrates the potential social impact of choosing an inefficient algorithm.

Andrew empathises with students' personal situations and seeks insight into the academic difficulties they encounter in order to offer pastoral care and answer their questions. During his career he has been Enrolment Advisor for eight years and International Student Welfare officer for six years, as well as participating in Girls into Science for four years and the Student Support Group for 16 years.

He also encourages students to appreciate the ethical and professional issues arising in programming careers and has perfected a cycle of feedback, reflection and improvement – with obvious success. Previously reluctant students asked to write 200 words on ethics and professionalism started submitting 2,000 words.

Andrew began using the world-wide web in 1996, when it was less than two years old and has been an early adopter of many, now standard, technologies such as wikis, forums, blogs, and video-recorded lessons. These technologies enable collaborative learning approaches to be applied in large classes and one student collaborative exercise using a wiki produced a chapter of an online textbook that provided resource material for future students.

Andrew values feedback from students and colleagues when developing and redesigning course content and curricula. After co-authoring a course textbook and introducing an automated and timely feedback system – *CodeRunner* – he helped restructure the University's BSc into a new Bachelor of Advanced Science (Honours) degree in 2016–2017.

Andrew mentors colleagues and has developed a handbook and mentoring programme for CS Tutors. He initiated a bi-weekly Teaching and Learning in Computer Science seminar series and established an expectation of teacher peer observation within the SoCS to better share and disseminate teaching practices between staff. He delivers seminars and workshops widely, as well as contributing to school holiday programmes and courses for adult students.

He has participated in more than 40 professional development workshops on teaching and learning, attended 20 International conferences on CS Education, completed the University's Postgraduate Certificate in Academic Practice, and was awarded a CLeaR Fellowship in 2014. He received a Faculty of Science Teaching Excellence Award, followed by a University of Auckland Teaching Excellence Award in 2018. His scholarly approach has resulted in more than 80 published academic papers about learning and teaching, including seven award-winning papers, and he leads a Computing Education and Learning Technology Group that meets weekly.

"In 2016 I received a Best Presentation award for the paper 'Learning to Program is Easy' at the ACM SIGCSE International Conference on Innovation and Technology in Computer Science Education for challenging the prevailing CS community view that it is difficult to learn programming."



Sustained Excellence in Tertiary Teaching General Category

Kathryn MacCallum

Associate Professor
School of Computing
Eastern Institute of Technology

“When integrating technology into teaching, the focus should not be on the technology itself, but rather on how the technology can support and enhance the learning process.”

Kathryn MacCallum knows the link between technology and effective pedagogy is not always simple. Driven by her natural love for teaching and technology, the lecturer and programme coordinator at Eastern Institute of Technology (EIT) aims to achieve effective technology integration practices. She sees technology as a way to better meet her students' needs and improve learning outcomes.

Kathryn's passion for technology started when she was young – but her love of learning evolved slowly. She struggled and felt disengaged in her early school days, as learning seemed to be textbook-focused and uninspiring. However, this perception changed at the end of secondary school, when a new art teacher's passion for her subject ignited Kathryn's own passion for learning. When studying at university for her IT degree, she became a tutor and discovered that her greatest passion was teaching. This inspired her to complete a PhD – researching how mobile technology can provide improved learning opportunities – and launched her teaching journey.

“I strongly believe learning should be a shared process in which my role is to facilitate this process and encourage my students in their own learning journeys.”

Kathryn sees teaching as a flexible process that responds and adapts to students' needs, interests and learning preferences. Her teaching philosophy focuses on designing authentic, engaging, inclusive and enjoyable experiences that create a collaborative and active learning environment. She has moved away from a lecture-style 'sage on the stage' teaching to a more workshop-style 'guide on the side' approach, enabling her to blend theory and practice in a more holistic manner in her classes.

Kathryn adapts and uses a variety of industry technologies, processes and practices, such as QR codes, Google Suite, Facebook, LinkedIn, and Agile and Lean technologies. She has adopted Work Integrated Learning, from inviting industry guest speakers to embedding industry projects in class assessments, where students work with local companies on real-world projects. This year, students secured an international project with MacDonald's Global Restaurant brand, working alongside a local company, Fingermark Global Ltd, to redevelop the MacDonald's drive-through experience.

Students learn how these technologies and practices can also be adapted and used to manage their own learning and this dual approach is a focus of Kathryn's research. She proposed and co-edited the first book to combine Lean and Agile Techniques in teaching and learning. She is

also a member of industry associations such as the Agile Alliance, which allows her to remain current in her teaching.

To enhance learning and interaction, Kathryn encourages students to bring their own devices into the classroom and uses collaborative tools, such as Google documents, Google Slides and other online tools, like Padlet, to enable students to work collaboratively. She also uses Google Sheets (Backlog) and Trello (Kanban) as scheduling tools to manage group tasks and the quiz tools PollEverywhere.com, Plickers, and Kahoot! for mixing up class sessions and assessing students' understanding. To create extra resources for her students outside the classroom, she uses video recordings or mini-intro videos (flipped learning), Adobe Connect and Zoom to livestream and record classes, and short videos using screen capturing tools.

As she believes room design and technical infrastructure play a significant role in supporting the effective and efficient use of technology and collaborative interaction, Kathryn launched an institute-wide project to develop three new classrooms at EIT in 2016, marking a significant shift in classroom design and the way in which technology is embedded and supported at EIT.

Kathryn's role as a teacher extends beyond the classroom. She mentors students and actively promotes ways for them to engage with industry. She sets up and supports industry and teaching events, research sessions and industry conferences. She also meets with industry to set up internships and research projects and manages the School's LinkedIn and Facebook sites, which promote events and jobs of interest to past and present students.

Community engagement is important to Kathryn. She is particularly focused on developing and supporting people wishing to enter IT, especially women. For many years, she has been active in conducting Taster Days and introduction sessions for local school students. As part of the IT Professional Organisation, she visits schools to promote IT as a career and has also been involved, both as a mentor and judge, in the regional Young Enterprise Scheme.

Kathryn's research has helped teachers to be more aware of learning theory. She and a colleague designed the online tool, Activity Design Analyser, which was later developed into a more complete Mobile Learning Toolkit. This resource allows educators to start their own exploration into best practices for mobile learning, and includes case studies, videos and tips on how to integrate effective pedagogy into learning design. It was published in the form of an interactive open ebook by the International Association for Mobile Learning (IAMLearn), which was later awarded best chapter.

Another practical resource for teachers resulted from a 2-year Ako Aotearoa-funded research project that explored how change and better teaching practice can be supported through the integration and use of mobile technologies. This resulted in the development of an ebook with over 18 case studies, exploring how mobile technology could effectively be integrated into a wide range of different tertiary contexts. The resulting journal article won an award for best article in the Education category in IGI Global's Tenth Annual Excellence in Research Journal Awards.

Kathryn's research has received both local and international interest. She is the Associate Editor in Chief for three international journals focused on supporting educational technology (Journal of Information Technology Education: Research; Journal of Information Technology Education: Innovations in Practice; and International Journal of Mobile and Blended Learning). She is also a member of the International Mobile Learning Association (IAMLearn), which runs the annual mLearn conference and is hosted around the world. Nationally, she has previously been involved with the Flexible Learning Association of NZ, previously referred to as Distance Education Association of NZ, as a committee member for over 10 years.



Sustained Excellence in Tertiary Teaching General Category

David McMorran

Senior Teaching Fellow
Department of Chemistry
Division of Sciences
University of Otago

“My job as a teacher of chemistry is to show students how to master the language of atoms and chemical reactions so that something new and beautiful and important can result.”

Finding new and better ways to do things is central to David McMorran's approach to teaching. As chemistry is fundamentally about finding new ways to assemble atoms, the building blocks of the universe, he finds it an intensely creative subject, much like art or poetry. He is passionate about his subject; and continually brings creativity to his teaching with new stories, new experiments and new uses of technology.

David has been a teacher for much of his life. He started teaching as a teenager, coaching swimming at his local swimming club. His first year at university confirmed his fascination and love for chemistry; and he soon found teaching even more enjoyable than being in the lab doing research. He now runs the largest chemistry course in New Zealand, with over 2,000 students enrolled each year, and often more than 500 students in each lecture. He also teaches 'bridging' courses, which fill in the gaps for students with limited backgrounds in chemistry, and is the 'go-to' person within the department and across the university. David has received two Otago University Students' Association awards – the Division of Sciences Senior Teacher of the Year Award in 2016, and an Otago University Excellence in Teaching Award in 2019.

Years of research experience and teaching in chemistry have given David a deep understanding of the subject and an ability to relate the scientific concepts to students' lives and interests. He enjoys 'lightbulb moments', when students suddenly understand an idea – or 'OMG moments', when students realise that something, they thought they understood, actually cannot be right after all. David describes his teaching of first-year students as metaphorically holding them by the hand and helping them out of the box within which high school chemistry confined them, and into the big wide world of actual chemistry.

David has developed better ways to teach a core paper in Otago's Health Science's First Year (HSFY) programme, which is rigorous, highly competitive and, for many students, stressful because of their varied backgrounds and abilities. He has also been involved in the provision of specific tutorial programmes for Māori and Pasifika students, as well as mature students and students with limited backgrounds in chemistry. He revises these bridging courses, rewriting their content and has now made them web-based, thus more accessible to students. The courses, which teach high-school level chemistry, are vital if such students are to attain the content knowledge and confidence they will need to succeed in chemistry.

“Chemistry goes on around us all the time – the trick is to try to find ways to connect students' experience of this to the underlying science being taught.”

The key focus of David's teaching philosophy is to teach understanding and the ability to apply that understanding. He connects new concepts with students' existing worldviews and finds multiple ways to connect with different learners. Being accessible is important to him. To relax students before a lecture starts, David arrives early and has jazz playing while they come in. He welcomes them, chats and answers questions, finding out more about their learning needs and background knowledge.

During lectures, David focuses on students gaining an understanding of concepts, rather than learning merely how to get to an answer. He uses analogies, video, animations, music, practical demonstrations, and interpretive dance – anything that will engage the students and enhance understanding. As chemistry can often be seen as a very abstract subject, David tries to make it more relevant by telling stories about the societal context and the chemists responsible for the ideas he is teaching.

David has developed many resources to help students better understand content and practise solving problems, such as Lecture Summary Notes booklets, weekly problem sheets (with worked answers), and worked answers for final exams. He has also created a series of 30 videos of lectures and experiments for the distance-taught courses and was the first in the Division of Sciences to use iPads in teaching. This won him a national award for tertiary teaching in 2012. David also arranges field trips to Dunedin's Mt Grand water treatment facility and Ravensdown Fertilizer works, so students can see first-hand the application of chemical principles taught in class and learn about potential careers in Chemistry.

David considers practical classes a vital part of teaching chemistry and give students the opportunity to learn how to 'do' chemistry. For many students, this is the real appeal of the subject and it is also a part of chemistry that has become increasingly difficult to offer in high schools, due to costs and Health and Safety concerns. David has developed new and innovative ways to assist and assess his lab classes, such as on-line exercises to help students prepare for labs, and he has worked with an app designer to develop the ChemTest app, which allows the students to do their end-of-lab exit tests on an iPad. For smaller classes, he uses lab reports to assess and give feedback.

As well as teaching students, David is a mentor to other academic staff and senior students in the Department of Chemistry and beyond the campus. Since 2010 he has produced 183 shows and podcasts on Science Notes on Dunedin's community radio station, Otago Access Radio, in which postgraduate science students talk about their research work, and themselves. He has taught as part of Otago University's Science Wānanga programme, teaching Māori students and living on the marae with them. Since 2004 he has taught at Hands-On at Otago (previously Hands-On Science), a residential science camp for Year 12 and 13 students. He judges at the Otago Science Fair and initiated, and has run, the Otago Southland High School Chemistry Quiz, now in its 16th year.

David also sits on numerous committees promoting chemical education. For his teaching and community engagement, he has been recognised by the New Zealand Institute of Chemistry, being made a Fellow in 2016, and awarded the Denis Hogan Prize for Chemical Education in 2017. In 2018 he was invited to join the Executive Board of the New Zealand International Science Festival.

"I am extremely lucky to be able teach chemistry, a field of science which is crucial to all aspects of our lives, and a subject that I love."



Sustained Excellence
in Tertiary Teaching
General Category

Dr Masayoshi
Ogino

Department of Global,
Cultural and Language Studies
University of Canterbury

“My passion is to help my students explore new ways of thinking about a world of diverse peoples and cultures – my mission is to transform their lives and I do this by teaching them Japanese.”

Masayoshi Ogino believes that learning an additional language broadens people's horizons and enriches their world and professional career. In his teaching, he strives to develop life-long communicative competence and social and cultural awareness in his students and encourages them to forge connections with their communities.

His approach has evolved over more than twenty years' teaching at secondary and tertiary institutions in Japan and New Zealand. His first position as a high school English teacher in Japan required exam-focused teaching, motivating him to pursue a more communication-focused language teaching. This he achieved at Hamilton Girls' High School as an exchange teacher in 1994–1996 and immediately saw the potential of this approach in providing a genuine and lasting experience for his students.

Masayoshi's start at the University of Canterbury (UC) coincided with the 2011 earthquakes, which had drastically affected enrolments, on top of the already decreasing number of Japanese learners in NZ since the late 1990s. These challenges provided incentives for him to be creative and innovative in his teaching practice and revitalise the Japanese programme. The resulting upturn in enrolments made his the most successful language programme in the College.

The cornerstone of Masayoshi's teaching approach is nurturing the Christchurch Japanese learning community by fostering connections and promoting student engagement. He sees his role as three-fold; a designer of effective environments, a facilitator of learning, and a connector. He links communities of learners, teachers and native speakers at all levels and situations. His mission is to enable students to function competently and confidently outside the classroom and, later, in a community which may be linguistically and culturally different from their own.

To facilitate such communication, Masayoshi runs mentoring sessions where learning is shared between 100- and 300-level courses. These enrich the Japanese learning community by embracing the diversity of students' backgrounds and boosting students' confidence through acting as role models. Masayoshi has also developed online communities using social media, such as Facebook.

To make connections and develop learning communities beyond this, Masayoshi's classes host Japanese students at UC's affiliated English school (150 students and teachers in 2018) and groups from Japanese schools and universities. Since 2015, he has arranged a yearly visit of Japanese children affected by the 2011 Tohoku Earthquake through the Support-Our-Kids (SOK) organisation. Another initiative is a Bilingual World Café forum, a structured conversation process for knowledge sharing with native speakers of Japanese who are learning English.

For the past six years, Masayoshi's students have acted as teaching assistants and mentors in an NCEA Japanese workshop for 350–400 secondary school students from over 15 local schools. This is the largest event of its kind in Oceania. In his Independent Course of Study, students are required to find, contact and interview a local Japanese immigrant and write an article about them in Japanese. Some students also write short essays for the Kiwi Time Magazine, which targets NZ Japanese readers.

Masayoshi harnesses the power of technology to bridge the gap between diverse groups who share common interests across nations. This makes his students' learning relevant, digitally advanced and inspiring, taking them 'out of the classroom' and 'into the wider world'. He regularly organises annual online Japanese guest lectures, with speakers including professional interviewer and writer Miyuki Chiba and photographer Ryosuke Mori, which provide students with direct and valuable expert knowledge and career ideas. Since 2017, he has co-organised an extension of online World Café forums using an advanced video-conferencing system, involving Japanese learners at UC and three other universities in Korea, Japan and Thailand.

Masayoshi's teaching and assessment process balances both 'knowledge acquisition' and 'learning community participation'. As the latter requires a shift away from traditional language teaching practices, he combines different types of assessments, such as Facebook-based tasks for communication and interaction within the community and essay writing for linguistic skills and knowledge. His students have received many national scholarships, awards and prizes. Over the past four years, Masayoshi has given over 15 presentations and keynote talks and organised online workshops. He has also invited successful New Zealanders in a variety of fields who use Japanese in their professions to be keynote speakers.

The impact of Masayoshi's leadership extends beyond UC and New Zealand, with his innovations found to be applicable and transferable to a range of institutions and disciplines. For instance, colleagues at UC, as well as in Australia and America, have incorporated his modifications to the UC Japanese language programme into their own curricula.

Masayoshi has recently pioneered online World Café forums for Japanese language educators, attracting 45 educators from 12 countries in 2017 and 60 educators from 15 countries in 2018. He has presented his findings from this initiative at five national and international conferences and workshops. He has further contributed to Japanese studies by serving on the executive of Japanese Studies Aotearoa New Zealand (JSANZ), co-establishing and chairing the annual JSANZ Tertiary Japanese Language Speech Contest in 2015–2017, and acting as the main driver in the successful bid by JSANZ to join the Global Network of Japanese Language Education in 2016.

Masayoshi was the chief editor of the book, *Creating New Synergies: Approaches of Tertiary Japanese Programmes in New Zealand*. He has received several awards including the College of Arts Excellence in Teaching Award and Lecturer of the Year in the College of Arts by UC Students' Association in 2017; and the Inaugural University of Canterbury Outstanding Teaching Practice Award; and a Certificate of Commendation from the Japanese Ambassador, in 2018, for his distinguished service in contributing to the deepening of mutual understanding and friendship between Japan and New Zealand.

"I will continue my efforts to improve my teaching practice and inspire students and fellow teachers by strengthening connections and developing multilayered learning communities."



Sustained Excellence in Tertiary Teaching General Category

Dr Heather Purdie

Department of Geography
University of Canterbury

“Earth is a dynamic and engaging classroom in which to teach students about interactions between people and the environment; real scales, real processes, real complexity.”

Heather's father instilled in her a passion for the environment and her desire to teach was inspired by her own positive experiences. She has always been fascinated by glaciers, was captivated by her Geography teacher's explanation for rock-roundness, and later, during teacher training, was challenged to reflect on simple questions arising from subjects such as waste management.

Her teaching journey began while working as a park ranger for the Department of Conservation (DOC) at Aoraki Mount Cook. There, she developed and delivered school education sessions as part of their Learning Experiences Outside the Classroom (LEOTC) programme, in which she is still actively involved. Later, while working as a guide at Fox Glacier, she enjoyed creating interactive ways to teach people about glaciers and climate change.

“Geography is about relationships between te tāngata me te whenua (people and land). Through my teaching I aim to ignite (or re-ignite) this connection; I want students to get excited about the environment and to have a desire to understand the natural world for its own sake!”

Heather's approach to facilitating a connection with the natural world is to 'bring the outside in'. She creates interactive lecture experiences that encourage students to engage and process their experience. She uses practical experiments to encourage students to develop and modify hypotheses, before linking the outcome of the demonstration to its related theory. These in-class experiments complement Heather's experiential teaching philosophy. She believes she doesn't need to go outdoors to apply an experiential philosophy to teaching, but can also tap into her students' past experiences, stimulating engagement and, through this, learning.

Complementary to her experiential classroom is her use of pūrākau, or storytelling, as a teaching tool. Heather uses this technique because it is engaging, fun, and stimulates reflection and learning. She believes people are never too old to be told stories and draws on Māori legends as well as personal stories from her glacier guiding days. She incorporates her own research results into her teaching and, through her personal stories, illustrated with photos and videos, students can vicariously experience a journey to the glacier or mountain.

As a physical geographer, Heather teaches at a range of locations in New Zealand and Antarctica. As traditional approaches to field teaching which involve staff leading a group of students, doesn't align with her experiential teaching philosophy – because it limits the opportunity for problem-solving, evaluation and decision-making – Heather redeveloped her approach to field teaching and assessment. She now asks students

to gather field evidence and to classify the landform themselves, stimulating critical thinking and problem-solving.

Prior to 2014, Heather ran field trips on Fox and Franz Josef Glaciers. However, as these have receded further up-valley, foot access has ceased and Heather has had to adapt her teaching to this changing environment. In 2015, she developed a field trip to a local ski-field, which also includes interaction with ski-field snow safety officers who, through their own stories, provide important links between theory and real-world application. She also presents videos taken during her own research – which capture the sounds and feel of the glacier – in lectures and online. She now hopes to use a 360° camera to create virtual glacier field trips for those students who are unable to participate in them. Such is her reputation for being a dynamic and effective field teacher, Heather has been asked to contribute to study-abroad programmes run by Sheffield University, England and Macquarie University, Australia.

Heather creates assessment items that are varied in style and provide opportunity for students to reflect and improve. She developed a 3-part video assessment that is a mixture of group and individual work, and based on a real-world scenario or a topic of the students' choosing. Peers, tutors and lecturers assess the 3-minute group videos, with the top videos shown and voted on by students and staff during a 'grand final'. Heather's approach to assessment at graduate level focuses on developing activities with real-world application, creating experiences that will assist students with future employment.

A particular interest of Heather's is fostering an understanding of Māori culture and in 2018 she received the College of Science Kaupapa Māori Award in recognition of her sustained commitment to improving bicultural competency. In 2015 she worked on the University's College of Science working group, Te Ohu Pūtaiao, tasked with undertaking a bicultural stocktake. As a result of this, she helped develop a new 100-level course designed to explicitly address bicultural competence in the science curriculum, and was invited to contribute to a workshop on Culturally Responsive Pedagogy.

In 2014, Heather completed a Post Graduate Certificate in Tertiary Teaching (PGCTT), building on knowledge and skills established during earlier teaching training (Graduate Diploma in Teaching and Learning). She is a Fellow of the Higher Education Academy and, as well as often being highly nominated as Lecturer of the Year, she was awarded the New Zealand Geographical Society President's Teaching Award in 2015 and a University of Canterbury Teaching Award in 2018.

Outside of her academic work, Heather is a valuable resource in the community. In 2016 she was invited to join the reference group that oversees the LEOTC programme run by DOC at Aoraki Mount Cook. In 2015 she worked with DOC to redevelop visitor interpretation panels at Franz Josef Glacier and she continues to provide science communication support to glacier tourism operators. She also maintains linkages with secondary school teachers, running workshops for students about glaciers and climate change and is a collaborator in an Ako Aotearoa-funded research project Bring Your Own Device (BYOD) to field class: Integrating digital and community mapping in field-based coursework, which helps students shape their own fieldwork futures.

"To really care for our environment we not only need to understand it, but also feel connected to it. 'Bringing the outside in' is one way in which I foster that connection..."



Sustained Excellence in Tertiary Teaching General Category

Dr Cami Sawyer

School of Fundamental Sciences
Massey University

“Excellent teaching is about being a ‘connectionist’, getting students to think about new concepts and make connections with earlier learning.”

As a maths teacher, Cami Sawyer is a ‘connectionist’. Her teaching philosophy is based in Situated Learning Theory, a model that draws on the sociocultural research of Vygotsky. This theory states that teachers and learners are active participants in the learning process. She encourages students to make connections with earlier learning and overcome barriers they may have created to learning maths, such as believing they can’t learn maths or see how it connects to their future goals. Cami creates a supportive learning environment with carefully planned, learner-centred and engaging lessons. As her teaching is increasingly in the online classroom, she constantly develops new skills and strategies to help her role as connectionist.

As Senior Mathematics Tutor at Massey University’s School of Fundamental Sciences, Cami teaches a wide range of students, from teenagers straight out of high school, to international students from varied education systems, and second-chance students, with families and full-time jobs, looking to make a life change. She teaches science students, business students and trainee teachers. For all of these students, a maths course is a compulsory requirement to achieving their goal.

Improving course design and course materials is integral to Cami’s teaching approach. When she started at Massey, she discovered that some of the core maths courses were not aligned with NCEA. In addition, courses were designed to teach skills in isolation with little focus on inquiry-based learning or creating connections with prior knowledge. During 2013–2014, she redeveloped two university preparation courses that were aligned to NCEA and changed the learning focus to emphasise conceptual understanding from multiple points of view. This redesign particularly helps students with weak maths backgrounds or who had been out of study for a long time. She more recently redesigned her Introductory University Maths, a course which is compulsory for a range of programmes, to better align with NCEA and scaffold learning. She also rewrote the study guide, using plain language and giving more examples.

Cami believes that, whilst curriculum design is critical, the design of teaching and learning activities is equally important. With distance courses, the design of the course in the learning management system (LMS) is integral to its facilitation. Cami works with students to build effective learning strategies that help them persevere and complete difficult tasks. Realising the printed study guide that she inherited was inadequate, Cami took a course on online learning design, redesigned the LMS site, and focused on making the ‘story’ of the course central. She created a welcome video that explained the key academic goals of the course and established her ethic of care. She also divided up the course to help students pace and prioritise their learning, using videos to introduce and present concepts.

A key feature of Cami's teaching is finding the areas on the edges of new learning, that may or may not already be understood, and asking questions around these. She believes that learning occurs at these moments, where students can see that a concept is not as straightforward as they first thought or that another student can understand it in a different way. She finds that getting the students to discuss these differences, either in class or online, helps them to create connections and have more investment in the concept.

As surface learning is likely to occur when students are anxious, working under time-pressure, or have low or limited expectations of success, Cami uses learner-centred approaches to design lessons that facilitate deeper learning. She strives to engage students by building their confidence in working with concepts, as well as incorporating history, applications, and humour into her teaching. To better connect with distance learners, Cami changed to more frequent email contact. To encourage students to ask questions in class, she created the 'There are no stupid questions' anonymous message page, which had a positive outcome.

Recognising that most distance students fit study in between other demands on their time and that most of her communication is asynchronous, Cami initiated synchronous weekly 'e-tutorials' to give students more real-time engagement. She uses Adobe Connect, simultaneously running an iPad with a whiteboard app and a PC showing student questions and comments.

Cami strives to strike a balance between demonstration and student-led creation. Instead of providing neat, organised notes for her students, she shows them best practice for laying out working and encourages them to 'create' mathematics and think about why each step makes sense. She fosters an environment where making mistakes is accepted as part of the process of doing mathematics and believes that catching and correcting mistakes develops a deep approach to learning. She demonstrates when maths technology is useful and uses online tools, computer programmes and hand-held technology such as calculators and mobile apps. For distance learners, who are taking the courses from all over the world, Cami uses video, a practice she was one of the first to adopt. These videos are not recordings of internal lectures, but bespoke teaching sessions, structured to help the learning of distance students. She creates a 'story board' of the lecture and acts as a 'guide on the side', being clear and concise, but incorporating humour. Since 2015, Cami has produced 186 of these videos, of which there have been 58,000 views.

Cami's outreach to local area teachers and students is extensive. She helps to run a competition for year 12 students, a Maths and Stats Forum (to connect Massey staff, area teachers, and industry), and Science and Maths Scholarship workshops for top year 13 students. She helped set up, and continues to work with, the Massey Māori Science Academy – Pūhoro. She also gives demonstrations to year 10 students when they visit Massey and organises the mathematicians for Open Day. She has convened the NZMS Education group since 2017, co-founded the NZ branch of FYiMaths (First Year in Maths) in 2016, and connected with university mathematicians, the Ministry of Education and NZQA in response to the NZ NCEA review in 2018. She established a gathering of Lower North Island Women in Mathematical Sciences, and has worked with the Pūhoro STEM academy since 2015 to develop their programme and create better understanding of the needs of Māori students between academics and NCEA.

"It is important for students to understand that hard work, rather than innate ability, is essential in learning maths."

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