

HE ROUROU KŌRERO

Research at EIT | Te Pūkenga

Te Aho a Māui

2021



Ancient & Imagined Fossil installation

Discovery play area in Cornwall Park's native plant garden

Linda Bruce (Tutor at Te Pūkenga EIT IDEASchool) submitted to the review of the Hastings District Council Cornwall Park Reserve Management Plan in 2019 that visual aesthetics need more consideration when developing public spaces/parks, improved aesthetics increasing community well being. This evolved into the idea for a discovery area within the native plant garden focused on bringing together history, arts, culture, ecology and landscape.

Linda and Susan Mabin, (Masters graduate of IDEASchool) were commissioned by Hastings District Council to develop a design encompassing these concepts. The resulting installation juxtaposes real and imagined, ancient and contemporary, arts and science. Jumbled together are hybrid creations of imagined things and embedded detritus of the contemporary age, creating a wonderland of tactile and visual experiences to explore.

Stage 1a of the installation was completed in early 2022.

Cover image:

Ancient & Imagined Fossil Installation: Strata Wall (detail)

Kotuku Play Partnership

Linda Bruce and Susan Mabin

2022

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Introduction

Nat Waran

Research at EIT is in a good position going forward into the new realm of Te Pūkenga, with solid foundations having been laid in 2021.

Knowing that change was coming allowed us to not only assess where EIT was as a tertiary research institute, but to also establish what role we could play in helping develop the research structure and protocols for Te Pūkenga.

Research expectations for 2021 were quite modest, thanks to COVID-19. Just when we thought we were over the worst of it in 2020, we were hit with lockdowns, restrictions and traffic light systems.

I would like to acknowledge the challenges and difficulties many of our researchers and their wider whānau experienced over 2021 due to COVID-19. Conducting meaningful research was often difficult, however the resilience of research and researchers is such that many were able to adapt and change their approach and there were some great positives a2021.

Although not being able to meet up with people working in the same discipline around the world may have hampered certain types of collaboration, nevertheless our people found other ways to connect and new collaborations, often involving researchers within our own sector.

Regionally responsive local research, led by applied researchers who can think globally and are active locally, is where I believe strong ITPs such as EIT have and will continue to grow their impact going forward. Our sector has considerable talent and together we represent a significant research presence nationally and in some areas, internationally. The challenge for all of us as we move into our new entity will be to continue to develop a supportive nationally networked research ecosystem that gives effect to Te Tiriti o Waitangi and provides for regional social, environmental, and economic development needs.

From my perspective we are well on track to achieving this. Throughout 2021, EIT and other Te Pūkenga subsidiaries remained committed to cultivating a sustainable network of researchers and collaborating on research. As an inaugural member of Te Poari Akoranga (the Academic Board of Te Pūkenga) I was pleased that we were supported in ensuring that Rangahau, Research and Postgraduate are key elements of the new organisation.

In my seconded academic advisory role at Te Pūkenga, I am working with the Rangahau forum and research directors, facilitating the creation of an inclusive kaupapa Māori ethical framework that's in line with the stated objectives of in the Te Pūkenga Charter.



Professor Nat Waran
Executive Dean and
Professor of One Welfare

This mahi is an exciting opportunity to create something truly unique, that is future focussed and enabling and can be used across all research within our sector.

This sort of interaction and collaboration has been occurring at all levels across the Te Pūkenga network, and our team at the Research and Innovation Centre (RIC), Dr Jonathan Sibley, Dr David Tipene-Leach and Megan Allardice, are active members of various research and rangahau workstreams and fora, working together to share information and help prepare for the sector transition at the start of 2023.

The lessons learnt in 2020 gave us the opportunity to not only look at our research and consider funding streams, but to also look at future-proofing our research capability and capacity in Hawke's Bay to ensure we have what is required to support our communities' needs.

This process is still ongoing and 2022 has already seen significant strides being made in the establishment of a Rangahau Māori Research Centre at EIT.

We recognise the importance of growing and developing Rangahau Māori and are committed to supporting the significant contribution that kaupapa Māori research makes in our region as well as to helping to develop this further within Te Pūkenga.

To facilitate this development, EIT was pleased to hold a landmark event, Rangahaua te Pō- uriuri (Developing our Potential). Hosted by our Professor of Māori and Indigenous Research David Tipene-Leach at Te Ara o Tāwhaki, Te Ūranga Waka in May 2021, the forum looked at ways to spearhead the growth of Rangahau Māori in Hawke's Bay and Tairāwhiti.

We were honoured to have Professor Linda Tuhiwai Smith, an educationalist from University of Waikato and the author of the ground-breaking book, *Decolonising Methodologies: Research and Indigenous Peoples*; and Professor Jenny Lee-Morgan, the founding Director of Unitec's Ngā Wai ā te Tūi Māori and Indigenous Research Centre; attend the event.

Running alongside this was an exhibition, *Mārama: Manuscripts with Memory*, An intimate audience with Ngāti Kahungunu tīpuna. This was the result of a significant research project undertaken by Professor David Tipene-Leach and Te Reo Māori researcher and archivist, Waitangi Teepa.

EIT is fortunate to have amongst us some highly respected experts in this area, including Professor Tipene-Leach in Hawke's Bay and Professor Derek Lardelli in Tairāwhiti. Nothing better highlighted the role Professor Sir Derek Lardelli plays in this regard than when the then Governor-General Dame Patsy Reddy travelled to the Whāngārā Marae to bestow a knighthood on Derek in front of whānau, colleagues and numerous dignitaries.

Our researchers also conducted two Rangahau Māori projects that achieved significant health and well-being results in our region. One of these was a project carried out by an emerging rangahau researcher that examined the impact of a fitness pod called the DOMYNIS on a local community.

This work, supported by the Napier City Council and the Hawke's Bay Medical Research Foundation brought three home-grown kaupapa together - the DOMYNIS, PATU and the MEKE METER. It was supervised by EIT's Associate Professor Rachel Forrest and carried out as a Master's project by Levi Armstrong and was supported through a post-COVID equity grant for Rangahau Māori awarded by the Health Research Council (HRC).

I am also pleased with the success of EIT's collaboration with the University of Auckland in the Nourishing Hawke's Bay: He wairua tō te kai project. This involves EIT researchers Professor David Tipene-Leach and Pippa McKelvie-Sebileau as part of a team that includes Boyd Swinburn, Professor of Population Nutrition and Global Health, University of Auckland (UoA). It sought to discover how mātauranga Māori can be incorporated into food systems in schools using a 'Systems Dynamics' approach to food security for rangatahi and tamariki in Hawke's Bay.

A further example of regionally relevant research was the work conducted by Dr Emre Erturk, of the School of Computing, who examined how digital exclusion could affect the quality of life for local small businesses.

EIT has always had a good reputation for its Viticulture and Wine Science programmes. It was great to see a new suite of innovative postgraduate qualifications being offered from July 2021 by the School of Viticulture and Wine Science.

The School has a number of talented young researchers, led by Dr Rory Hill, and in a bid to showcase their work, Head of School Sue Blackmore and her team organised a very successful research symposium, called Advancing Viticulture and Wine Related Research. It was an example of EIT taking a national lead with researchers from the University of Auckland, Nelson-Marlborough Institute of Technology (NMIT), Lincoln University, the Bragato Research Institute (BRI), LandWISE and Ag Research participating.

A major focus for EIT and research is sustainability and we have developed a comprehensive strategy with community partners that not only guides our EIT activities, but also has a broader educational role in our regions.

It's also heartening to see Te Pūkenga taking a lead in sustainability by actively connecting staff involved in this work at different ITP subsidiaries into a community of practice.

A highlight was EIT winning the 'Benefitting Society' Category in the prestigious Green Gown Awards Australasia for our community-focused

Learning in Nature (LIN) project. You may remember that we were finalists last year also in the Benefitting Society category for the development of the Ōtātara Outdoor Learning Centre. This work was in collaboration with staff and students across a number of schools, Ngāti Pārau, central and local government agencies (Department of Conservation, Hawke's Bay Regional Council), and local schools. EIT is now automatically a finalist in the International Green Gown Awards 2022.

We were also able to bolster our EIT Sustainability and Environment team with the addition of two experienced environmental educators, Robyn McCool and Megan McBride, who are playing an important role in connecting EIT's educators as well as teachers from schools and early learning centres in Hawke's Bay with this wonderful space.

One of the projects that has involved the OOLC was a Research Photo Exhibition called Making Meaning in Nature. Over the past year Dr Emily Nelson (EIT), now an Associate Professor; Professor Bronwen Cowie (University of Waikato) and Chelsea Sellars (EIT) have been involved in a photovoice research project exploring the value of the outdoor learning centre to various participant groups.

EIT remains active in the Sustainability and Environment front with the latest in our Policy Think Tank series being held in October on the topic of Regenerative Agriculture and the Future of Farming. It was well attended and attracted some great discussion.

Apart from holding events and being involved in community research, a key focus in 2021 was encouraging our Early Career Researchers (ECRs). To aid this process, one of our most prolific researchers, Dr Pii-Tuulia Nikula, joined the RIC team on a fixed-term contract as EIT Researcher Development Manager. Pii-Tuulia proved to be an asset to our team by working with research chairs, mentors and Heads of School to ensure that our new and emerging researchers are well supported.

Our new Research Output Management System (ROMS) went live in 2021 and is already making our research management more efficient and effective. It enables researchers to keep a good record of their output and certainly helped when we held our mock PBRF exercise in late 2021.

This was certainly a big year, and I would like to thank all those who contributed to making it so successful. We have shown what we can do and despite COVID-19 it has turned out to be a year to remember as we continue to lay the foundations for future successes as Te Pūkenga.

Ngā mihi nui

Professor Natalie Waran

Reflecting on Research at EIT through the years

Chris Collins

As the major tertiary provider in Hawke's Bay and Tairāwhiti, EIT has developed a reputation for delivering quality programmes from vocational certificates to applied professional postgraduate qualifications, and is also now regarded as having legitimate strengths as an applied research institute.

Over the years, EIT has grown its reputation with the appointment of notable researchers such as Professors David Tipene-Leach and Roger Maaka in Māori and Indigenous Studies, Executive Dean Professor Nat Waran, the now-retired Research Professors Kay Morris Matthews and Bob Marshall and Professor/Ahorangi Sir Derek Lardelli at EIT's Toihoukura, the School of Māori Visual Arts. This has been alongside the productive Research and Innovation Centre (RIC), led by Associate Professor Jonathan Sibley.

In New Zealand research must underpin undergraduate and postgraduate degrees and the start of EIT's research journey can be traced back to the development of our first bachelor degree in 1995 and our first master's degree in 2002. Today, with 15 undergraduate degrees and 19 postgraduate qualifications, around 30 percent of EIT's students are studying at degree and postgraduate level. What few people realise, is that more students now enrol in degree level study at EIT than any other qualification level.

The first small steps in this research journey started in the mid-1990's. Now retired Executive Dean, Dr Susan Jacobs, who was then Dean of the Faculty of Health Studies, led discussions on the approaches to the development of a research culture to support a Bachelor of Nursing degree.

Susan recognised that it was important to support academic staff and enable them to engage in further postgraduate study, and to encourage staff to build a research culture by sharing their masters and PhD research journey and their findings with their teaching colleagues.

Even in those early days, it was about maintaining a balance across quality teaching, strong relationships with clinical agencies and building an applied research culture across both.

With Susan and Joanna Harper, the Hawke's Bay District Health Board (HBDHB) Director of Nursing at the time, there was strong relationship between EIT and the HBDHB and its associated agencies. To encourage a research culture within the practice discipline in 1996, Joanna and Susan went on to establish a nursing research periodical called 'Vision: A Journal of Nursing' which was published for just over a decade.

EIT's applied research culture expanded further with the subsequent development of EIT degrees across a range of disciplines, including a



Chris Collins

EIT Chief Executive



Professor Bob Marshall and
Dr Susan Jacobs

Bachelor of Arts (Māori), a Bachelor of Business Studies and a Bachelor of Computing Systems, Bachelor of Teaching (Primary) and Bachelors in both Viticulture and Wine Science.

Further impetus was provided in 2002 with the appointment of EIT's first Research Professor, Dr Bob Marshall. EIT was working to establish its first masters programme, a Master of Nursing (MN), and part of its proposal was to appoint a Research Professor to further support the MN and the development of applied research across the Institute.

The Professorial requirements were benchmarked across the country, and a robust Professorial appointment process was put in place, which led to the appointment of Dr Bob Marshall from Auckland University as EIT's first Research Professor.

Bob had extensive research profile across health and sport science; both qualitative and quantitative research experience and research supervision experience; and had held several high-level academic management positions. He hit the ground running in planning approaches to help build a research culture.

By the time I was appointed CEO in 2004, research at EIT was already beginning to take hold under the leadership of Bob and Susan. I mandated Susan to establish an EIT Strategic Research Committee which - drawing on the expertise of Bob - began developing Institute-wide policies to support the growth and strengthening of EIT's research and preparation for EIT's entrance into the nation-wide Performance-Based Research Fund (PBRF).

For me, the decision for EIT to participate in PBRF was straightforward. Senior staff such as Bob and Susan were keen to be a part of the national research ranking PBRF process and it was my own view that it was important for staff to have opportunity to be recognised nationally as active and respected researchers. Hence I made the decision for EIT to participate in the PBRF process. By this time EIT was offering a wider range of degrees, and under the legislation, these degree programmes were required to be taught by people actively engaged in research.

It was also an opportunity for staff with research ambitions to become more research active and build on their careers. It enabled EIT to attract staff who were already research active, but who may have been reluctant to move to an institution that had decided not to participate in the PBRF process.

A related key aspect to participating in PBRF was that it ensured that staff were supported and had realistic expectations about how PBRF assessed research and the challenges that PBRF presented for those in more applied fields of research. Applied research was an area that PBRF was still coming to grips with.

For the record, EIT demonstrated through PBRF that it was one of the highest ranked research institutions in the Institute of Technology sector, and a small number of staff ranked highly, including achievement of the 'world class' 'A' rankings.

However, I was also very clear, and quite determined, that as an institution we must adopt a broader definition of research than what PBRF was utilising. To this end we adopted the broader NZQA definitions of research. I did not want EIT to become obsessed and driven by PBRF rankings and results, as was clearly evident in some higher education institutions in New Zealand.

I wanted research activity that was connected and engaged with our local communities, businesses, industry, people and regions. What I was looking for was effective applied professional, and clinically related research that was engaged locally.

This might mean that some of our researchers were not publishing results in international journals, but importantly they were helping local stakeholders and organisations solve problems of importance to them even if that meant staff published locally or nationally. This type of research activity must remain important to us to ensure that we are engaged locally with our research activity - I did not want to see this 'sacrificed at the altar of PBRF'.

A further pivotal moment for EIT was when Bob Marshall persuaded Professor Kay Morris Matthews to move to Hawke's Bay to become the inaugural Research Professor in what is now the Faculty of Education, Humanities and Social Sciences.

This built wider EIT research firepower, alongside Dr Roger Maaka in Rangahau Māori, providing EIT with credible and respected research leaders in their respective fields of study.

Kay played a major role in mentoring staff conducting research over the years, and she also had an important role in advocating for meaningful recognition of applied research at a national level. I think Kay would also acknowledge that coming to EIT opened up opportunities for her to take on national research representation roles which she might not have had if she stayed in the university sector.

While each Research Professor had been appointed to work within a particular School or academic area, as strategies evolved, soon Bob, Roger and Kay were each working with lecturers across a range of academic areas. Their work in mentoring emerging researchers was of enormous importance. Furthermore, over several years, Bob and Kay alternated in leading the Research Office which provided key advice on policy and strategies to me as CEO alongside that of our EIT Strategic Research Committee.



Professor Emerita Kay
Morris Matthews

PBRF provided one measure of research quality and with the Strategic Research Committee, EIT used the funding to build a pathway to embed a research culture in the DNA of EIT. I used to jokingly boast to colleagues elsewhere that 100% of our professors were appointed to the PBRF research assessment panels. Not many institutions could claim that - mind you, we only had three professors, but they were all on research assessment panels!

Our Professors all made important contributions in pushing the advocacy nationally for the place and role of applied research, which is where EIT's focus was as an institute of technology based here in the regions of Hawke's Bay and Tairāwhiti.



Professor/Ahorangi
Sir Derek Lardelli

A further significant event was the promotion from Associate Professor to full Professor, of Derek Lardelli, now Professor/Ahorangi Sir Derek Lardelli, of Toi Houkura - EIT's School of Māori Visual Arts. Derek had national and international standing in his field and has subsequently been conferred a knighthood for his contribution to Māori creative and performing arts.

Internal promotions are also important for institutes because these staff set examples and take people along the research journey with them, attract research grants, develop teams, all of which helps to build momentum and the culture of the institution. Part of this was in also promoting and appointing strong researchers to Associate Professor positions, something we benchmarked carefully against other research institutions.

The importance of Māori research has featured here at EIT, and the role Dr Roger Maaka played was also significant, and it remains an area where we have ranked highly. After Roger's retirement, Susan, Bob and Kay worked to fill a gap in Māori research - particularly seeing the need for a highly qualified researcher who could work in across community health and wider Māori research, and work started on this.



Professor Emeritus
Roger Maaka

Following Susan's retirement, I wanted to ensure we retained strong research advocacy around the executive leadership table, which Susan had ably provided. For me it was a high priority that we continued with an appointment of someone who had a strong understanding, capabilities and passion around research as part of the executive team.

To this end I was very pleased to be able to appoint Nat Waran, a Professor from Edinburgh University, who came with a strong research background and a PhD in Applied Behaviour and Animal Welfare from Cambridge University. Professor Waran came to EIT from a position as Director of the 'International Centre for Animal Welfare Education' and the International Dean for the Veterinary School at the University of Edinburgh. Nat was an active researcher and had a good understanding of the role of New Zealand polytechnics having previously worked in a leadership role at Unitec.

I appointed Nat to the role of Executive Dean to lead her Faculty and to also importantly provide institutional leadership around research and to continue to develop and drive the research culture at EIT. This is something Nat has ably and passionately accomplished since her arrival, making a key contribution to EIT in continuing to grow and strengthen our capability in research.

In 2017 Dr David Tipene-Leach was appointed Māori and Indigenous Research Professor and was tasked to provide a lead in Rangahau Māori (Māori research) at EIT and in the wider community. Since arriving Professor Tipene-Leach has been leading some major research projects and attracted considerable research funding with these projects.

Professor Waran also provided a lead in developing a Research and Innovation Centre with its own facilities and staffing to support staff and further develop research and researchers. Nat appointed Associate Professor Jonathan Sibley as Research Director of the Centre, following Bob Marshall's retirement, and Jonathan has worked hard to encourage staff to engage in meaningful and applied research and provided strong support systems to various research projects.

Co-ordinating and managing postgraduate research administration through the Centre and redefining the EIT research strategy were priorities for Nat and Jonathan, as well as raising the profile of the Professoriate, including inaugural lectures and a policy think tank series, all to build on what Nat has referred to as our 'regionality'.

EIT has the ability to focus on research projects that are of importance within our community. Leadership has been important in this, and we have that through David Tipene-Leach and Derek Lardelli, two eminent professors in their field who have raised the importance of our understanding of the value of a bicultural and partnership approach.

Nat and Jonathan have also developed an infrastructure that means that there is strong information flow up and down, between the Strategic Research Committee and the actual disciplines within the Schools.

On reflection EIT has done really well attracting high-profile researchers and research leaders such as Susan, Bob, Kay, Roger, Nat, David, Jonathan and Sir Derek Lardelli.

At the end of it all, the key to EIT's research success, and our future going into Te Pūkenga, is to be not only community-focussed but also be working to uplift and build deeper understandings within our community through our research activities. My hope is that we continue to build on this and provide a vibrant and supportive environment that values and supports a strong research culture going forward.

Empowering Rangahau Māori at EIT

A Rangahau Māori Centre at EIT has been driven by the need to build Māori research capacity to provide support and help to local communities.

A focus of EIT's Research and Innovation Centre in 2021 was to lay the foundation for a Rangahau Māori Centre, which harnesses the Māori research capabilities within EIT and seeks to find new talent to work on meaningful projects that help solve issue for and with local communities.

The new centre, with its own Advisory Board, is on track to be launched in late 2022.

Leading the charge to create the centre and to also uncover a new group of Māori researchers has been EIT's Professor of Māori and Indigenous Research David Tipene-Leach, who believes rangahau is not just a "nice to have" but is vital for the development of "a strong research environment and as a means to effect real change in Aotearoa".

"We have to start building up Māori capacity to do this work and we have to get more penetration into communities. If the groups that need research done know that there are Māori researchers at EIT, then we will get more opportunities to do research."

"It is a critical time to begin building a strong cohort of young Māori researchers applying rangahau across all spheres of society."

David says this will give organisations and the community confidence that the Māori researchers at EIT are well trained.

"We're trying to build up our capacity to be able to develop and support researchers."



Professor David Tipene-Leach

"The bottom line is that Māori influence is everywhere and is becoming an everyday part of our New Zealand life. We need to build this capacity as a positive expression of the character of Aotearoa and dispense with outmoded problem-oriented ways of being," says David.

David says the Rangahau Māori Centre will have staff to support Māori research and researchers including a new Research Manager. The Centre will also benefit from the research mentorship provided by the newly appointed rangahau Māori Professor. Professor Annemarie Gillies (Ngāti Kahungunu, Ngāti Awa, Te Whanau-a-Apanui and Te Arawa), is a well-respected business and management academic who was a senior researcher at Massey University, and who recently held a Professorial appointment at Te Whare Wānanga o Awanuiārangi.

Professor Nat Waran, EIT's Executive Dean and Professor of One Welfare, says that the establishment of our new Rangahau Māori Centre was

something that we recognised as needed to provide the positive impact required to support our region's needs, but also through Te Pūkenga's network, contribute nationally. Developing Rangahau Māori capability and confidence will be a game changer for ensuring meaningful and sustainable changes to benefit many communities.

Nat, who was an inaugural member of Te Poāri Akoranga, the Academic Board of Te Pūkenga, says the importance of developing and supporting the development of rangahau Māori is being actively driven through the newly established Te Ohu Whakahaere Rangahau Māori, Research and Postgraduate, a sub-committee of the Board.

In 2022 Nat, David and EIT's Director of Research Jonathan Sibley were all pleased to be selected as members of Te Ohu Whakahaere Rangahau Māori, Research and Postgraduate. David withdrew from the sub-committee shortly thereafter to focus on the Rangahau Māori Centre.

"We will have a strong focus on the development of rangahau Māori and being able to really strengthen and facilitate that kind of research that is done by Māori for Māori."

"The point of our regional Rangahau Centre is that it will be guided by a board that has mana whenua taking a leadership role. It's important that community informs and supports the research questions, owns the Centre's authentic approaches and that they feel they have ownership of the outcomes."

Nat says that the research can be anything that is of importance in terms of development and economics, as well as the environment that people live in.

"What we are doing is regionally responsive and there should be real benefit from the many projects that are and will be facilitated through the Centre."

Jonathan says the establishment of the Rangahau Māori Centre will be a major development because "we're deepening the work that we do".

"It is also significant because it will lead to the development of further capability, which is central to Te Pūkenga. And within that context, it contributes to a strong voice for rangahau Māori within Te Pūkenga."

"We have seen the development and maturity of rangahau Māori here, which is supported by management, the EIT Board and within Te Pūkenga. We have also had support from key national funding agencies and, significantly, we are now working with universities as the lead organisation in many of these applications."

Jonathan says that a lot of work had been done in setting up a governance group and forming the entity which would go into Te Pūkenga.

In terms of how the new centre will fit in with RIC, Jonathan is quite clear.

“Our job here is to support research at EIT, so nothing changes. We will support the centre and we will help to deliver on the plan. It is no different to what we do to help research at the level of the different Schools.”

Jonathan says that the key thing is that the Rangahau Māori Centre fits with Te Pūkenga’s main objectives.

“It is about developing research capability in Māori, delivering on the Treaty and focussing on issues that are relevant here, and also nationally.”

Strong Māori supervision will be another cornerstone of the new centre.

“We have to build stronger Māori supervision capability, so that we have experienced Māori researchers supervising young Māori students doing projects relevant to their communities.”

While the new Rangahau Māori Research Centre will have an initial focus on health, it will also include other matters of significance for communities, including food security, culture and archiving the rich history of hapū and iwi in the region and the environmental challenges.

A launch date for the centre will be announced sometime in 2022.

Shaping Research going forward in Te Pūkenga

Enabling a research culture to be embedded in Te Pūkenga has been an objective of EIT's research leadership, along with their counterparts around the ITP network.

From 2023, Te Pūkenga will be the national tertiary institute that 16 Institutes of Technology and Polytechnics (ITP), 11 Industry Training Organisations (ITO), and close to 250,000 learners will be part of.

EIT Chief Executive Chris Collins says that he often gets asked about the future of degree level provision at EIT, as the sector reforms focused on sub-degree level vocational education.

"As most know, EIT has built extensive degree and postgraduate provision into its portfolio, right through to Master's degree. What people often don't realise is that more students at EIT are enrolled in degree-level programmes than in any other qualification level."

"This wide-ranging education portfolio will continue in Te Pūkenga. The primary focus will continue to be applied, professional and vocationally orientated, and to grow and strengthen all qualification levels from foundation through to postgraduate level. A key future focus will be on building more work-integrated and work-based learning that best aligns with the needs of professional groups, business, and industry."

Chris says EIT's applied research commitment into the region will also continue.

"EIT is currently attracting more applied research contracts than ever before, particularly related to regional health and Māori health initiatives. This will continue on into Te Pūkenga."

Professor Nat Waran, EIT's Executive Dean and Professor of One Welfare, says research and postgraduate has been on the agenda of Te Poari Akoranga, the Academic Board of Te Pūkenga, of which she was an inaugural member.

In her seconded academic advisory role at Te Pūkenga, she has been charged with facilitating the development of a new research ethics framework for Te Pūkenga and has been working with the rangahau Māori forum and the research directors' forum, in creating an inclusive kaupapa Māori research ethics framework that's in line with the Te Pūkenga Charter and Te Tiriti o Waitangi.

"This is an exciting opportunity to create something that is future focussed, innovative and enabling and can be used across all research within our sector."

She says that Te Pūkenga has recognised the significance of ensuring and enabling the future growth of rangahau, research and postgraduate by establishing Te Ohu Whakahaere Rangahau Māori, Research and Postgraduate, a sub-committee of Te Poari Akoranga.

“There’s been some really healthy discussions around the table at Te Poari Akoranga, and it was heartening that we had the Rangahau Māori, Research and Postgraduate subcommittee as one of the first subcommittees to be stood up. With a specific subcommittee under the academic board, we can be reassured that the work is valued and will continue to be supported and grown.



Associate Professor
Jonathan Sibley
Research Director

In 2022 Nat, EIT’s Māori and Indigenous Research Professor David Tipene-Leach, and EIT’s Director of Research Associate Professor Jonathan Sibley were all selected on to this sub-committee. However, David has since withdrawn to focus on establishing EIT’s Rangahau Māori Centre.

Nat says that the key for research going into Te Pūkenga is building and keeping good relationships and partnerships.

“You can’t force people to work together; you need to provide them with opportunities to co-develop research questions and approaches, and then support new collaborations. I think what the rangahau Māori forum and the research directors’ forum of Te Pūkenga have done is to come together to consider how they can work to support the development of an overarching research and innovation strategy within the new context.”

Nat is pleased that EIT has been able to play a significant and in places ‘leading’ role in helping to move research forward.

“There’s been a real benefit to us all coming together and being able to draw on the collective, EIT has been a significant player in relation to driving some of the initiatives needed to have an integrated research network.”

“The research questions and approaches will always be right where the research and collaborations are with communities at regional level, and within Te Pūkenga we have the opportunity to scale much of our community centred research to tackle national and in some areas, international concerns.”

Nat says that EIT is increasingly collaborating with a wider range of groups, including the other ITPs, universities and other organisations.

“We’re demonstrating good leadership in different areas, and we are enthusiastically supporting the transition into Te Pūkenga of our national network of providers who are research active, as well as ensuring the growth of emerging rangahau and research. For our learners carrying out their research projects they can link with research projects across a much wider group of researchers across the Pūkenga network.”

“We sit proudly alongside our colleagues in other ITPs in the network and wider, and we hold our own extremely well. And we certainly add to the pot when it comes to collaborating on those wider issues, like providing feedback on the future shape of PBRF, so that it really does reflect what New Zealand’s about now and the importance of valuing research that’s needed at regional level.”

ITPs coming together, under the umbrella of Te Pūkenga, is a strength that we can develop as a new and exciting national network, says Nat.

“Our sector has considerable talent and together we represent a significant research presence nationally and internationally. The challenge for Te Pūkenga has been to develop supportive research structures that give effect to Te Tiriti o Waitangi and continue to support social, environmental, and economic development needs at both national and regional level.”

“I don’t think there was ever any doubt that there would be a thriving research culture within an organisation like this. But importantly, it’s the nature of the kind of research that we do, that will differentiate us. For example, we will have a strong and overt focus on the development of rangahau Māori and Māori researcher capability. The way that we will grow strength in this area is by making this a real focus for the work that is being done within Te Pūkenga regionally and nationally.”

Jonathan says that EIT’s move to establish a Rangahau Māori Centre is important because it is leading towards the further development of capability, “which is unique to Te Pūkenga”.

“Within that context, it contributes to the creation of a voice in Te Pūkenga. And then you start taking this into the wider context, where EIT has been involved in developing the subcommittees under the Board. Now we are thinking about the research ethics framework, which Nat is leading, with David leading with other kairangahau in the network supporting the conceptualisation of research ethics through a kaupapa Māori lens.”

Jonathan says another important part of building research in Te Pūkenga is to focus on emerging and early career researchers.

“We had a symposium that Dr Pii-Tuulia Nikula held with researchers at Unitec, which was very successful. We have carried on developing the new research, getting them ready for PBRF and putting their own systems in place. By doing all this, we are linking ourselves more closely with others in Te Pūkenga and having input into Te Pūkenga that will have an impact.”

The way forward for EIT is to highlight its strengths and Jonathan says an example of this is the building of research capabilities in the School of Viticulture and Wine Science under the guidance of Head of School Sue Blackmore.

“To me, the important thing about this group is they are doing exactly what Te Pūkenga was set up to do. They are carving out a unique place and Sue has brought these good young researchers together, who have taken ownership of their research.”

“The school has put very rigorous processes in place, and they led the way in 2021 by organising a Wine Symposium that attracted papers from all around the country.”

“The key thing in that symposium is that EIT wasn’t just a Polytechnic, it was able to deliver. The School of Viticulture and Wine Science provides a basis for something quite unique in Te Pūkenga and is demonstrating leadership in an area which is economically particularly important across other parts of Te Pūkenga as well as here.”

Sustainability is another area that Te Pūkenga has indicated will be an important part of the structure from 2023. EIT has placed great store in this. Nat has been in charge of driving EIT’s sustainability strategy over the years as well as creating research opportunities in this area. In 2021, EIT won the Benefitting Society Category in the prestigious Green Gown Awards Australasia for its community-focused Learning in Nature project.

EIT is also providing input to the Te Pūkenga sustainability strategy. Together with Unitec in 2021, EIT organised a series of Sustainability ‘Show and Tell’ online hui for colleagues working on sustainability initiatives across the ITP and Transitional Industry Training Organisations (TITO) sectors to come together to share. The series of hui was supported by Ehsan Yaeghoobi, the Sustainability Lead for Te Pūkenga.

Nat says that Te Pūkenga has embarked on the task of establishing an overarching Sustainability Strategy that recognises local differences while also progressing national sustainability outcomes.

“It’s also heartening to see Te Pūkenga taking a lead in sustainability by actively connecting staff involved in this work at different ITP subsidiaries into a community of practice.

Jonathan says that it makes sense that sustainability will be another important part of research in Te Pūkenga.

“So many campuses have this as part of their research focus because they’re in regions where the environment really matters to the economy of the region and we’re one of those. Otago is also a large one as well as NorthTec, but we are noticing that people are through the network focusing on that.”

Jonathan says that another research focus for Te Pūkenga will probably be the Arts, with the IDEASchool working with its counterparts to highlight the local projects that are gaining traction. EIT has always had a strong research

focus in IDEAschool and Toihoukura in Tairāwhiti and it is this research capability that will see EIT contribute to the network's success.

"It's inescapable that bringing the art schools together in some way, shape or form will be beneficial to Te Pūkenga, but the detail of what that looks like, is most likely still being worked out."

David has also been involved in establishing a research culture in Te Pūkenga and says there has been a lot of communication about the shape of the future.

"I also believe that what we need to do is knuckle down and do the work at our local level as best we can so that we are ready when we all come together."

Jonathan says his understanding is that research will continue in the same way as it is today,

"I think we will see research being undertaken by academics at campuses. I suspect there will be certain areas of focus because of in part the Charter and in part the natural strength of Te Pūkenga."

Nat is of a similar opinion and is optimistic about Te Pūkenga's research potential.

"We're very confident that research will be valued and will continue and be strengthened within the new organisation. It will also be potentially more focused around regional, industry and developing capability."

"It is important that we look at our research in the context of Te Pūkenga and what Te Pūkenga's objectives are. Having a very strong regional focus will continue to be important, but we still need that research to be scalable if it can be, and the opportunity for scaling it is greater now."

Nat believes the potential for growing the impact of research within the Te Pūkenga network is significant mainly due to the connections we have directly with issues of concern in regional New Zealand, many of which translate to national and international issues of concern.

"Increasingly we will see an emphasis and requirement for research to be co-designed or partnered in relation to local business and communities, and with a need for all research to have real and measurable impact."

"Our research story will be even greater in Te Pūkenga because we will have the opportunity to share our community-centred approaches, strengthen our capability and capacity, and involve our local connections, to provide New Zealand with a coordinated differentiated impactful researcher network who can help make a real difference," says Nat.

Update on Themes

Community Health and Wellbeing

A collaborative EIT research project that shone a spotlight on inequities in food security in Hawke's Bay, has played a role in bringing communities together to address issues around the eating and other habits of our most vulnerable children.

The Nourishing Hawke's Bay: He Wairua tō te Kai project, which is part of the National Science Challenge "A Better Start", recognises the link between nutrition and overall wellbeing including children's physical, mental and oral health and has found itself working with the Ka Ora Ka Ako Healthy School Lunches programme. The research project sought to find out how mātauranga Māori adds to robust food systems in schools and brought a 'Systems Dynamics' approach to the improvement of those food environments for rangatahi and tamariki in Hawke's Bay.

EIT researchers Professor David Tipene-Leach and Pippa McKelvie-Sebileau are part of a team that includes Boyd Swinburn, Professor of Population Nutrition and Global Health, University of Auckland (UoA); Erica D'Souza, Liggins Institute; Sarah Gerritsen, School of Population Health, UoA; Nat Alfonso, EIT; David Rees, Synergia and Crystal Pekepo, Matatua. New team members are Dr Rachael Glassey and Brittany Chote of EIT.

The research was initiated because the local food system was failing to deliver on nutrition health outcomes (vegetable and fruit intake) with Hawke's Bay having the highest levels of childhood obesity nationally.

Pippa says the project has sought to find out what is important to stakeholders, document what is happening in schools, measure a baseline of health outcomes, and establish a coordination and networking platform for school food programme cooks and suppliers, on which existing and future initiatives can build.

The researchers collected baseline quantitative data collected from 2,087 Year 5 (primary) and Year 9 (secondary) students (aged 9 or 13) from forty-one primary and secondary schools, including schools participating in the Ka Ora, Ka Ako Healthy School Lunch programme.

Students answered an online survey covering wellbeing, physical activity, sleep, screen use, food behaviour and were measured/weighed for body size. Nearly 17% of students experienced food insufficiency in the home and 31.3% of 13-year-olds did not eat breakfast. Overall, only 12.9% met the national vegetable intake guidelines and 39.6% met the fruit intake

Nat Alfonso, Dr Rachael Glassey, Pippa McKelvie-Sebileau, Brittany Chote and Professor David Tipene-Leach



guidelines. Students in high advantage schools (decile 8-10) were twice as likely to meet the vegetable intake guidelines.

Just over 47 percent of 13-year old girls were at risk of reduced wellbeing. In total, 54.6% of students had a healthy weight and 44.5% experienced overweight or obesity; in low advantage (decile 1-3) schools 64.4% experienced overweight or obesity.

The data form a baseline for an evaluation of multiple public health initiatives underway in Hawke's Bay to improve food environments and nutritional wellbeing. But the raw statistics, as confronting as they are, are only part of the story of this unique research project. What it has revealed is how communities can come together to find solutions.

For David, the project has been an outstanding success because it has highlighted a need in the community, and it has been an opportunity to undertaken meaningful Māori-centric research.

"This project is getting bigger, and it now has a good solid base that is Māori, Pacific and community centric. It also has a lot of mātauranga Māori aspects to it and it is all about the children."

David says the research outputs, led by Pippa as part of her PhD, have been good with six articles being published in two years.

"We are now trying to extend the whole food security work out into whānau and iwi and further out into the regional organisations, not just the Māori organisations, that are concerned with food in Hawke's Bay. The aim is to make some sensible model of a food environment that can be useful in solving the food problems of certain parts of our community."

David says the researchers have made two interesting discoveries during this project. The first is that school systems know the families who are at risk and have problems, while the second is that COVID-19 has exposed those risks for all to see.

"Those particular families were the first to put their hands up and say help, but we have come to know that in a time of emergency, food security is pretty tight in this country. It is not easy to get by and food packages are now being supplied for working middle class families.

"Here we are in the food bowl of New Zealand and the big question for us is how we facilitate a conversation amongst the big players in the food ecosystem in Hawke's Bay to create ways for us to provide a network for further emergencies of any type," he says.

One key for David is creating a food roadmap and a policy framework that could be rolled out across the country.

"We would like to have a good example of a regional food system that other people might look at and say: 'We should be doing something like that.'"

An important element is not just creating the systems to provide the food, but to create a culture around food. In effect, teaching people how to eat and the importance of putting food in context.

"These schools are now bringing in food and cooking it. They have cooks from the community who are making the food and they are all sitting at tables, saying grace before the meal and talking all the way through their meals, rather than just gobbling it down as quickly as they can."

"This may sound silly, but the key point is that the children are sitting down having a whānau-like lunch break rather than a packed school lunch that they try to eat while they are running around playing football."

One over-arching question is what mātauranga Māori has to add to best practice school lunches in the first instance?

"I'm aware that indigenous food environments are now being talked about in the United Nations. They want to know what we can learn from indigenous food systems that will enrich the land and feed the people at the same time."

David says the success of the food programme is that it has an intimate understanding of the needs of its whānau - the school community is creating networks to feed their own children. Not only is it making sure healthy food is on offer, but it is bringing the community closer. It is also bringing schools closer together.

"Principals are now talking to each other. We've got schools changing their ways of doing school lunches and they are now producing healthy lunches."

David says that Covid-19 did create obstacles for the food programme because lockdowns meant many of the most vulnerable children were not going to school so were not getting their lunches. The system worked perfectly when the children were coming to school, but what happens if they are not?

The question is how to move it along from school lunches towards looking at food security at a bigger level.

“Are we building on our school food security programme or are we jumping into a totally new food security approach? What it comes down to is that it is about whānau and how we ensure they have food security.”

The insight that the research team has gained came about from a self-complete online survey developed for administration via 100 tablets using Alchemer software during a school visit with Year 5 and Year 9 students.

The survey was pilot tested in three secondary schools in the Auckland region in 2019 and two primary schools in Hawke’s Bay in 2020 and refined following feedback.

It included 20 low-reading-load questions on physical activities; sleep; screen use; fruit, vegetable and unhealthy food consumption; food sufficiency at home; and the 5-item World Health Organisation Five Wellbeing Index (WHO-5) questionnaire.

Pippa says there was a lot of interest from the schools to participate and identify the health and wellbeing issues facing their students. She says that “students’ voice and their aspirations really matter”.

Pippa says that while the data has highlighted some really confronting patterns in our community, the role of the researchers was to focus on the strengths and opportunities coming out of the project.

“The food security story is not necessarily just about deprivation and disadvantage, because what we have seen is school communities coming together to find local solutions for their problems.”

Optimising performance in professional cyclists, where every hundredth of a second counts, has been a research focus for Dr Carl Paton, Associate Professor in EIT’s School of Health and Sport Science.

Among his other research projects, Carl has been involved in two studies as a supervisor to two PhD students, who looked at methods to improve the performance of elite cyclists.

Carl says that the difference between winning a gold medal and coming fourth at the top level in sport has proven to be very small.

“One percent does not sound like a lot, and it is very hard to measure a performance improvement of 1% in elite sport, but it can be critical and very often is the difference between winning and losing.”

“That’s how narrow it is at the top-end in most sports. Running, throwing, cycling and swimming all rely on this small gain. They all add up and while you hope that you can come up with something major, you don’t get massive gains in performance.”



Associate Professor
Carl Paton

Critical power and \dot{W} recovery characteristics of team pursuit cyclists is a study, led by PhD student Charlie Pugh, from Loughborough University in the UK, in collaboration with the University of Waikato and EIT's Carl, who is co-supervisor.

Carl says the work has been done in conjunction with Cycling New Zealand and the New Zealand Olympic Team Pursuit Squad.

According to the abstract, leading a 4-km team pursuit (TP) requires high-intensity efforts above critical power (CP) that deplete a rider's finite work capacity (\dot{W}), whereas when following in the aerodynamic draft, riders may experience some recovery due to reduced power demands.

"This study aims to determine how rider ability and individual CP and \dot{W} measures impact TP performance and to what extent \dot{W} can reconstitute during recovery positions in a TP race."

Three TP teams, each consisting of four males, completed individual performance tests to determine their CP and \dot{W} . Teams were classified based on their performance level as International (INT), National (NAT), or Regional (REG). Each team performed a TP on an indoor velodrome (INT: 3:49.9; NAT: 3:56.7; REG: 4:05.4; min:sec). Ergometer-based TP simulations with an open-ended interval to exhaustion were performed to measure individual ability to reconstitute \dot{W} at 25-100 W below CP.

The study concluded that CP and rate of \dot{W} reconstitution have a greater impact on TP performance than \dot{W} size and can differentiate TP performance level.

Carl says the study, which is due to be published in the International Journal of Sports Physiology and Performance, is the first one to look at individual performances within the team.

"There's been other studies in the past that have looked at using group models, but nothing that's looked at individuals within the team and how they're placed."

He says the research looked at the modelling of the team's performance and trying to find the best combination of riders and positions.

"We know that being on the front requires a lot more power than sitting behind somebody, drafting behind. Charlie and the rest of us have been looking at coming up with some mathematical models that basically estimate how much energy they've got and how much power they can produce. Once we've got all their physiological characteristics, we then try to fit them into positions so that we get the most out of them, so that they finish the race empty, which is the whole goal."

Another study that Carl has been involved in is Small performance benefits for caffeine and caffeine/blackcurrant combinations during repeated high-

intensity cycling. The project is the PhD research of Lillian Morton from the University of Auckland. Carl, who was Lillian's lecturer 20 years ago, is an associate supervisor on the project, which was done in conjunction with Arepa NZ.

"Lillian has been looking at the effects of nootropic substances, essentially New Zealand blackcurrant products, because they're world renowned for their high antioxidant contents."

"Supplements containing blackcurrant extracts (BE) have been reported to benefit sports performance and this investigation looked at the effects of acute supplementation with a BE supplement in isolation or in combination with caffeine (CA) on repeated high-intensity endurance cycling."

For the research, twelve trained cyclists completed four experimental sessions consisting of repeated (8 x 5-minute) self-paced maximal-intensity efforts. Four experimental treatments were administered in a double-blind, balanced Latin-squares cross-over design; Blackcurrant + Caffeine (BC), Blackcurrant + Placebo (BP), Caffeine + Placebo (CP) and Placebo + Placebo (PP).

"Blackcurrant administered in isolation has little effect on performance or physiological measures during repeated high-intensity cycling. However, caffeine consumption in isolation or in combination with blackcurrant may provide a small but potentially beneficial enhancement in performance."



Associate Professor
Rachel Forrest,
Levi Armstrong and
Dana Armstrong

What started out as a small, but significant rangahau Māori project examining the impact of a mobile gym in Maraenui, Napier, has led to community engagement as well as Council and business support that has allowed the initiative to become permanent.

At the end of 2020, a team of EIT researchers was awarded a post-Covid equity grant for rangahau Māori for a research project that examined the impact a fitness pod called the DOMYNIS has on a community.

The EIT team of Associate Professor Rachel Forrest, Maria Pearson, Dana Armstrong and Levi Armstrong, along with an external researcher, Dr Fiona Cram, received the grant from the Health Research Council (HRC). Levi and Dana Armstrong, who are married, were Master's students who were both doing their theses on aspects of health and wellbeing interventions.

The HRC grant was to evaluate the M.E.K.E. (motivate, engage, connect, evolve) Initiative: Taking health and fitness to whanau. This initiative, which was initially supported by the Napier City Council and the Hawke's Bay Medical Research Foundation was one of 11 projects that collectively received more than \$6.3 million in funding that the HRC announced for new research studies designed to help ensure equitable health and wellbeing outcomes for all New Zealanders during the recovery from Covid-19 and future infectious disease threats.

The DOMYNIS - a gym in a container - which was the brainchild of Napier community fitness guru and EIT Master's student Levi Armstrong and architect Whare Timu, was set up at the Maraenui shopping centre for the community to use at no cost.

Rachel says the reaction to the pod from the community was amazing.

"There was a positive vibe in the community about it. You just needed to drive by when a session was on to know that it was something that was bringing the community together and that was good for the community. Even just watching the Facebook discussions. The research just confirmed what was blatantly obvious."

"The pod was only supposed to be there for two months, but the fact that the community wanted it to stay is one of the most positive outcomes of the project."

Because it proved to be such a success, the Napier City Council has committed to keeping it there permanently, while local businesses have also pledged support for it. Rachel says the Council facilitated a meeting of interested parties which resulted in enough money coming through to keep the pod in place.

The key to the research project being such a success, says Rachel, is Levi and Dana's role as influencers.

"If you have the right person in the right place and you build research around it, then you're always going to get good community buy-in. Levi and Dana

doing their Master's is perfect for growing Māori research capacity locally, because they're both influencers in their own right."

"The focus of the research has been wholly to make sure the community outcomes were at the forefront, not the academic outcomes. We have kept the HRC and the Napier City Council up to date with informal reports, but for us the main outcome is that the pod is still there."

"What came through in the narratives were that it was 'just like the old days'. They felt that they were all getting together and doing something as a community."

"Back in the day they would have community sports events and different whānau events, but children would also play cricket on the street and those sorts of things have been lost."

The pod was pivotal in reconnecting the community as people had become isolated because of Covid-19 and lockdowns.

"People had become isolated, using their avatars and their social media, but this has tapped into every part of community life, including social media."

"It reconnected people within the community and built whanaungatanga for the community. It was so inclusive that you had all walks of life there. There was a lot of media interest, so people were asking questions and if they aren't asking questions then they don't know what they don't know."

The Maraenui project has been the culmination of a long journey for Levi, who, along with Dana, developed the PATU kaupapa after graduating from EIT in 2011. PATU Aotearoa, founded in 2012, is an award-winning social enterprise that provides sustainable healthy lifestyle programmes targeting Māori and Pasifika whānau in high deprivation communities across Aotearoa. PATU programmes promote whanaungatanga - a sense of family connection - and are primarily based around group exercise activities that are interwoven with tikanga Māori.

At the same time Dana and Levi have juggled a young family (now comprising four children), study, community work and trying to make a living. Both of them focused their Master's work on the Meke Meter App, with Dana looking at the impact on rangatahi, whereas Levi focused on the impact of Covid-19 on wellbeing.

Levi says he included some recommendations from his research because there was a connection between physical wellbeing and mental wellbeing.

"I looked at the impact of a lockdown on people's physical wellbeing. They were restricted to training and a lot of the gyms had closed down, so that had a huge impact on mental wellbeing."

He says there was a chain reaction that came through in the methodology he used to get data.

“The very first lockdown in March 2020 was quite important because we weren’t really too sure how long this pandemic would last. And now we’re talking about it today and it’s still going on. But knowing the impact, the main focus was on lockdowns and the impact of isolation, and then increase in alcohol consumption and some of the qualitative stuff I found in my research in Maraenui and also with another cohort across New Zealand.”

Levi’s thesis was entitled The Meke Meter™: exploring the wellbeing and quality of life of New Zealanders during the Covid-19 pandemic in 2020 and focused on the indigenous App that he and Dana had developed.

“The Meke Meter™ is a subjective hauora (holistic health and wellbeing) self-assessment tool developed in consultation with indigenous communities. As part of the research, participants were also asked about the usefulness of the Meke Meter™ and whether they intended to continue using it.”

“This study also highlights the importance of culturally appropriate tools and instruments built by indigenous people, for increasing a greater response from indigenous communities particularly for research purposes,” says Levi.

Dana’s thesis for her Master of Health Science degree is entitled Using the Meke Meter to understand rangatahi hauora in the Aotearoa New Zealand secondary school context. (See student projects for more details).

Despite a fall in national suspected self-inflicted death (SSID) numbers in 2020, such incidents in Hawke’s Bay have continued to rise to the highest ever recorded.



Chris Malcolm

EIT Researcher Chris Malcolm, who is a Lecturer in Health Science (Applied Practice and Addiction programme) at EIT, has evaluated Mates4Life Hawke’s Bay, a locally developed initiative that aims to provide suicide awareness, prevention and mental wellness training to Hawke’s Bay workplaces and organisations.

Chris says the overall goal is to increase suicide awareness across the district and ultimately prevent suicide in the region - from Wairoa to Dannevirke.

According to Coroner statistics quoted in the Mates4Life programme scope document, the rate of SSID has increased by almost 60% in the last two years.

One response to this is the Hawke’s Bay Suicide Prevention Three Year Plan. This plan embraces the vision of the Suicide Prevention Network of “Zero Suicides in an equally healthy and positive Hawke’s Bay”.

The Mates4Life programme supports this vision with goals to empower and enable communities, provide accessible suicide prevention training, strengthen and improve post/prevention processes and address the suicide prevention needs of targeted populations.

Tumu Timbers had already begun providing suicide awareness training for their staff, after the death of an employee in 2014. That programme was based around a Canadian programme Mates In Construction that had been adapted for use in Australia. It was then used in Auckland and Christchurch, where it was run by South Canterbury DHB Suicide Prevention Coordinator (and suicide researcher) Annette Beautrais. Bronnie Coory from Tumu Group and Kerry Gilbert (Hawke's Bay DHB Suicide Prevention Coordinator) worked with training provider A-OK (NZ) to develop this further into the Mates4Life Hawke's Bay, programme.

All staff received a one hour General Awareness training, with more advanced targeted training provided to smaller groups. A roll-out was begun to a wider group in the Tumu ITM group and their customers.

Chris's evaluation was in response to the second of the four Mates4Life programme goals, which was providing accessible suicide prevention training in the region. It also gave valuable feedback to the Ministry of Social Development who provided some funding for this suicide awareness initiative.

Chris says the programme was initially delivered in 16 sessions across four days in the second week of July 2021.

"Two hundred and forty-seven participants completed a survey questionnaire at the beginning and end of these training sessions."

A month later 122 staff from Bostok New Zealand also completed the workshop and the questionnaire.

"The questionnaire comprised eighteen questions. Six of these were symmetrical 'before' and 'after' questions, aiming to measure change in participants' awareness of issues relating to suicide, and their confidence and skills for addressing these issues and supporting people who may have suicidal ideas or who have been affected in some way by a suicide or suicide attempt."

Chris says the questionnaire also collected demographic information about participants, which may be used in future to 'drill down' in more detail.

"This would look at factors such as whether the training was more effective with different ages, genders or ethnicities. Information for separate sessions can also be extracted, that could give feedback on whether the effectiveness of these sessions improved or evolved over the week of delivery, or whether different facilitators' delivery style had any effect."

The evaluation showed significant increases in awareness and confidence across the majority of workshop participants. The success of the programme can also be seen in one of the follow-up questions which asked participants how they felt discussing these confronting issues. The response



Professor Rachael Walker

indicated 84% of participants felt that this was a safe environment in which to explore these issues.

Separation from family, social and community support and financial burdens are added pressures that rural and remote Chronic Kidney Disease (CKD) patients and their caregivers face, new research led by EIT researchers has found.

The research Exploring rural and remote patients' experiences of health services for kidney disease in Aotearoa New Zealand: An in-depth interview study found that these added pressures can have profound consequences on patients' psychological and physical wellbeing and that of their families.

The research, funded by Kidney Health New Zealand, was conducted by EIT researchers Dr Rachael Walker and Professor David Tipene-Leach, in conjunction with Sandra Hay from the Department of Nephrology at the Canterbury District Health Board; Curtis Walker of the Department of Medicine, Midcentral District Health Board; and Professor Suetonia Palmer from the Department of Medicine at the University of Otago in Christchurch.

The rationale for the research is that people with CKD living in rural communities have increased risks of death, morbidity and hospitalisation, and poorer quality of life than people with CKD living in urban areas.

The study explored the experiences and perceptions of rural and remote patients and families in relation to access to health services for kidney disease in New Zealand.

The researchers spoke to 35 participants - 26 patients and nine caregivers and assessed the impact that had on the patients having dialysis. Semi-structured interviews were conducted with participants via digital technology (Zoom, face time or telephone) or face to face between December 2020 and July 2021 by Rachael and Sandra.

"The participants were adult patients with CKD accessing specialist nephrology services and their caregivers who lived further than 100km from the nearest dialysis or transplant centre."

Potential participants were recruited through consumer support groups (newsletters and social media) and by two NZ nephrology units which service large geographical areas.

Rachael says that five themes or trends were identified from the research.

"The five themes and related subthemes were intense psychological impact of rurality; pressure of extended periods away from home; services not designed for rural and remote living; suffering from financial losses; and poor communication."

“Participants were emotionally exhausted from constant travel, stress and the lack of support they received. For some patients and caregivers this resulted in an embedded and unresolved trauma,” says Rachael.

The research revealed that patients expressed grief and guilt as they felt they were a burden because of relocation, travel, extended periods away from home, needing assistance with home dialysis and financial pressures.

For many, their partner or children had to give up work or education to support them with transportation or responsibilities at home. The burden of care damaged relationships, constrained finances, and caused household stress. In some situations, children were removed from schooling as they needed to travel with the patient out of town, resulting in a sense of guilt, the study found.

The patients also found the long days travelling away for dialysis training or treatments, waking up at 5am and returning in the evening, was physically demanding and left the participants feeling “absolutely worn out”.

The research also found that the patients were angry.

“Participants were angry about being told that they had no choice but to travel or relocate and felt a lack of understanding by health professionals about the wider implications of relocation.”

“Many were frustrated that services weren’t available within rural and remote communities, given the burdens and cost of travel and accommodation,” says Rachael.

The rural patients also felt that they were missing out on family occasions and interactions with children and grandchildren.

“This was particularly experienced by participants who were spending extended periods away from home. Participants described an intense and unacknowledged mental health impact of ‘putting their life on hold’. They were despondent that no one other than their peers who were in the same position had any understanding of how hard this was and the impact of this on mental and emotional wellbeing and resilience.”

The patients’ experiences led to a lack of confidence in the accessibility, quality and specialised knowledge of kidney disease within primary care services in their rural and remote communities. A lack of health workforce stability often resulted in poor continuity of care and did not inspire trust and confidence in the primary care teams. Participants often felt that their visits were “a waste of time”.

Treatment when they arrived for appointments also led some patients to anger, which was related to being disrespected, and resulted in them “stopping going to most appointments”.



Associate Professor
Anita Jagroop-Dearing

The average perceived levels of stress experienced by EIT's international postgraduate Nursing and Health Science students working on the frontline during the first Covid-19 lockdown was higher than optimal in terms of wellbeing, EIT-led research has found.

The research, Covid-19 Lockdown in New Zealand: Perceived Stress and Wellbeing among International Health Students who were Essential Frontline Workers was conducted by Associate Professor Anita Jagroop-Dearing from EIT's School of Health and Sport Science; Dr Griffin Leonard of the National Centre for Peace and Conflict Studies (Research Affiliate), University of Otago; Dr Syed Shahid from EIT's School of Health and Sport Science; and Dr Ondene van Dulm, Head of the School of Health and Sport Science.

The study used a cross-sectional survey design among international postgraduate Nursing and Health Science students studying at two EIT campuses (Auckland and Hawke's Bay).



Dr Syed Shahid

The students were enrolled in EIT's Postgraduate Diploma of Health Science, Master of Health Science and Master of Nursing Science programmes. Fifty-one international students were invited to participate and 43 responded, with data from 42 used. Thirty-eight of the students were female and the rest male, with the age range between 18 and 54. They came from India, Sri Lanka, the Philippines, Nepal and Brazil and over 90% of them had left family behind. Over 65% worked as essential health workers in aged care facilities, hospitals and pharmacies.

The research focused on the lockdown over the first wave of Covid-19, 25 March to 27 April 2020, and its border closures having a significant effect on New Zealanders and visitors in the country at the time.

Anita says the international nursing and health science students, who traditionally come to New Zealand to benefit from its world-renowned education system, were affected by the lockdown.

"We sought to understand the impacts on these students."

Anita says that with the Covid-19 environment changing, she adapted a paper she was writing for the International Journal of Environmental Research and Public Health to emphasise the angle of the shortage of nurses and health professionals globally.

"In most countries, we already have a shortage of health professionals, but here we had a group of international health professionals stuck in their host country. My evidence showed that we need to support them better since these health professional students explained what they needed to help them cope better."

"Not only do international students make positive contributions to their local communities, amongst other inputs they also fill the gaps in skilled labour,

and pre-Covid-19 contributed an astonishing \$4.8bn to the economy annually.”

The research examined the stress, challenges and associated coping mechanisms of international students in order to best support this group’s health and wellbeing during the pandemic.

The study concluded that the “unique situation” that the international students at EIT found themselves in during the first lockdown appeared to manifest itself in a variety of challenges, which were likely to be less common among New Zealand’s broader population.

Anita says the students made a significant public health contribution as they worked in the frontline of the Covid-19 outbreak.

“Average perceived levels of stress among participants suggest that this population experienced levels of stress during lockdown that would generally be considered higher than optimal in terms of wellbeing. In particular, separation from family and working as an essential healthcare worker presented challenges to maintaining health and wellbeing.”

“Our data show that personal and academic support services offered by tertiary institutions are utilised by students and deserve continued investment if we are to benefit from the public health contribution that these students make,” Anita says.

Employers should also recognise the increased labour undertaken by essential workers. “Key ways of doing this are raising remuneration and ensuring that workplace safety equipment (e.g. PPE) is sufficient and fit for purpose.”

The study found that international students who work in healthcare are essential to the maintenance and promotion of health in their host countries.

“Given the increasing public recognition of the role public health plays in pandemic responses, it is more important now than ever before to understand the wellbeing needs of these tertiary nursing and health students as public health workers, so that we can best support them,” says Anita.

Another long running body of research that Anita has been involved in relates to the Havelock North Campylobacter outbreak in 2016. Anita, along with other researchers, has written an article entitled Clinical outcomes of campylobacteriosis: A case series analysis of hospitalisations associated with the Havelock North Campylobacter outbreak for the New Zealand Medical Association Journal.

Anita’s co-authors in the study were Dr Bridget Wilson, Dr Nicholas Jones, Dr Tim Wood, Dr Jan Kubovy and Professor Michael G Baker.

The impact of the outbreak on Havelock North and its residents was major, with four deaths linked to it. The analysis describes the clinical complications of cases admitted to hospital as a result of acute infection, identifies risk factors for hospitalisation and compares deaths between hospitalised and non-hospitalised cases. Hospital admissions with post-infectious sequelae were excluded as they are the subject of a separate analysis.

"A case series analysis was undertaken by reviewing the electronic medical records of 933 residents of Hawke's Bay District Health Board with probable and confirmed campylobacteriosis linked to the Havelock North Campylobacter outbreak."

"We focused on 58 patients who had severe cases and had to go to hospital. We followed them for about a year and looked at the reasons they were admitted."

Anita says that on reflection the results were not dissimilar to Covid-19's impact, with older people with underlying conditions being most affected.

"There were the severe complications like dehydration, electrolytes imbalance, kidney injury and kidney failure and it showed that it was the older population and those with underlying conditions who had to go to hospital."

"We also found that the proportion of hospitalised cases that died within one year was significantly higher when compared to deaths among non-hospitalised cases, although this trend was not statistically significant after adjusting for age and comorbidity," says Anita.

"We concluded that this research highlights the serious health impacts that occurred from a campylobacteriosis outbreak of this magnitude."

Another issue close to Anita's heart as a parent and a researcher is vaping among adolescents. She is part of a regional working group called SAVE: Stop Adolescents Vaping E- Cigarettes which was established about a year ago by a group of multi-disciplinary health and education professionals "alarmed at the perceived increase of vaping by children and young people."

The objectives are to develop future health promotion campaigns at a local level, to advocate for further policy and resources from the Ministry of Health to find or develop best-practice guidelines to support staff working with young people who want to reduce their vaping.

"I am part of this group, which is made up of members with quite varied backgrounds, including researchers."

"We have collected preliminary data on just under 4,000 participants with online surveys of secondary schools in Hawke's Bay. Initial data is showing that 18% of these students are vapers and 39% of them had never smoked before, but now they are vaping."

Anita says an unintended consequence of campaigns to move adult smokers on to the “less harmful” vaping, is that secondary school students have been attracted to its “coolness”.

“It is unfortunate because vaping may be beneficial to adults as an alternative to smoking, but it is not beneficial to young lungs who have never smoked before and who may suffer different health issues because their lungs aren’t developed. ‘Popcorn lungs’ is a condition that may occur in adolescents who vape.”

Anita says that the Government has introduced legislation to change the flavour of vapes sold in dairies so that they are not attractive to children but there is a lot more to be done.

“What they’ve done is to make the flavours only mint and methanol or tobacco because the kids used to like the flavours like bubble-gum and watermelon.”

“Some of the further research I am interested in doing is to find out which retailers children use to get their vapes from and also to find out why they feel it is okay to vape.”

Anita says that secondary school students need to be educated about the harmful effects of vaping and she is keen to play a role in providing this community service, possibly through a lecture series.



Charlotte Chisnell
and Sarah Elliott

Social workers need to be supported in identifying and working with victims of Child Sexual Exploitation (CSE), who are often regarded as being in a transactional relationship, EIT researchers have found.

Charlotte Chisnell, a Social Work Lecturer at EIT’s Hawke’s Bay Campus, and Sarah Elliott, a Social Work Lecturer based on the Tairāwhiti Campus, joined forces to research CSE, which they say does not necessarily get the attention it deserves.

Both have experience in child protection social work practice. Charlotte was a social worker in the UK working in the practice area of child protection and youth justice. Her research interests include safeguarding children and raising awareness of child sexual exploitation and young carers. Sarah's key social work areas have been at Oranga Tamariki (practice leader), adult intellectual disabilities (manager), health social work and human rights.

They are collaborating on The reality of CSE in Hawke's Bay and Tairāwhiti, Aotearoa; Exploring the knowledge and experience of child protection social workers. They are currently conducting primary research but have studied national and international literature on the subject for the past two years.

Charlotte says their hope is that the outcome of the research will inform social work practice and policy within Tairāwhiti and Hawke's Bay.

"We are undertaking a qualitative research project utilising focus groups and interviews which will take place with child protection social workers from across Tairāwhiti and Hawke's Bay, as well as a range of organisations with a focus in child protection."

The study is investigating what knowledge, experience and training social workers, working in child protection have in relation to CSE, as well as exploring what services and support are currently available for young people who are victims of CSE.

Sarah says they are also attempting to identify any barriers that may exist when working with young people who experience CSE.

"We are also exploring what social workers feel might help support and improve the outcomes for victims of CSE."

Globally the term child sexual exploitation is used to describe exploitive situations in which a young person engages in sexual activities in exchange for money or goods. CSE includes face to face grooming, online grooming and commercial trafficking.

Charlotte says CSE is a form of child sexual and emotional abuse.

"However, because the exploitation occurs in situations where a young person enters into a transactional arrangement, there is an assumption that they are making informed choices with an equal bargaining power rather than being controlled and victims of abuse. There is no doubt that they are victims," she says.

The researchers believe that there are limited ways to engage with victims of CSE and there is resistance to collaboration and partnership with professionals in New Zealand.

"This is due to the 'hidden' nature of the abuse, the barriers to disclosure, NZ's complete lack of data collection system, under-utilised legislation with

low conviction rates, a lack of effective multi-agency protocols and negative professional attitudes toward victims of CSE,” the researchers say.

Charlotte and Sarah believe that there needs to be more emphasis on securing prosecutions, through the use of joint investigations and multi-agency responses and coordinated data collection systems.

“The significant change that needs to take place within CSE work is a conceptual shift from a victim needs-led response to a much more child protection response which includes support for victims and their whānau.”

“We argue strongly that there is a need to tackle the culture of denial and increase professional accountability. Ultimately, barriers to effective practice must be acknowledged and addressed, and the rhetoric of policy needs to be translated at all levels, a system of coordinated collaboration in all departments and across all agencies,” says Sarah.

Charlotte says it is important that the narrative changes and moves away from assigning blame to victims.

“Above all we need to see CSE as a very specific type of child abuse. This can initially be achieved through being able to view the concept of CSE within a wider systemic perspective which recognises societal power and abuse.”

Vignette

Ormond Heather

[An EIT researcher has worked with members of the Hawke’s Bay Magpies rugby team to examine the relationship between force-velocity profiles and rugby performance indicators associated with success.](#)

Ormond Heather, who started his research as a Master’s student, is continuing the project while working as a Lecturer in the School of Health and Sport Science. His research was Practice to pitch, the relationship between force-velocity profiles and match performance.

“We are trying to identify which style of training correlates best to different measures in rugby. Should we be training fast, should we be training slow or should we be training somewhere in between.”

Ormond says that once the optimal training velocity was identified, the next thing to examine was the orientation of the exercise.

“We looked at how rugby players trained in the gym and how this enhanced performance.

We tried to replicate the movements on the field in the gym so that we could maximise training transference to the field.”

"Most gym exercises that we come across, like squats or other lifts, are quite up and down. But when we go into the sports, especially rugby, it's horizontal-based. What we're trying to do is we're trying to find out which exercise in the gym best relates to different rugby performance indicators."

Ormond, who says he was an enthusiastic rugby player, did testing for the research in July 2021.

Twenty-two members of the Magpies rugby team were recruited for the research - 10 backs and 12 forwards.

Each subject performed four exercises (sled push, sled pull, back squat and jammer push-press) at incremental loads to establish force-velocity profiles. Performance indicators (post-contact metres, tries, turnovers conceded, tackles, try assists, metres run, tackle-breaks and defenders beaten) were collected over nine weeks.

"We assessed the velocity that they moved at for incremental weights and then we ran some analysis with the stats that the season had reported, and we tried to find relationships between some of those stats and the movements that we ran."

"We found that the horizontal movements or hybrid horizontal correlated best to those performance indicators that we measured. We also found that relationships with tackle breaks, with tackles themselves and metres run with those horizontal movements, which was interesting."

Ormond says the results suggest horizontal resistance training may be best for rugby performance (tackle-breaks, tackles and metre run). It was also noted that some performance indicators require a specified balance between force and velocity, represented by the force-velocity profiles.

Ormond says he is working with other researchers to advance the research and see how it aids on-field performance.

Innovative Education

Some primary maths teachers have modified their teaching patterns because of an anxiety about the subject that stems from when they were students, an EIT lecturer's doctoral thesis has found.

Julie Whyte, a Teacher Educator in EIT's Bachelor of Teaching (Primary) programme has just completed her thesis - Mathematics anxiety and primary school teachers: The histories, impacts, and influences, through Massey University, and is grateful for the support provided by EIT during her doctoral study.

She says maths anxiety is real and is something even teachers of the subject have to cope with.

"Society as a whole has this thing about maths. Most people can relate to sitting around a dinner table with friends, and if something came up about reading, no one would say that they couldn't read or hated reading. But maths is different. People jump on board and say things like: 'Oh no, I'm useless at maths' or 'Yes, I hate maths as well. I can't do it.'"

A mature student, Julie's Master's also focused on the issue, which she first noticed when she was a primary school teacher in Manawatu.

"What got me interested in it was that I noticed a couple of boys in my class seemed to have an adverse response to maths. Every time maths came up, they had all of these excuses not to get involved with it. It was at that point that Julie made the connection between the behaviours and maths anxiety - a term she became familiar with while completing her Master's.

"So that's what my Master's actually ended up focusing on because many people you talk with are really quick to admit that they hate maths. And I've seen it in primary school students, in teachers that I work with, in university colleagues, as well as at EIT."

"I just thought, 'I need to learn more about this.' There was lots of research done in relation to children and pre-service teachers, so people who were studying to become teachers. And I thought that I need to start with the teachers themselves to see what's going on with them."

Her research revealed some interesting findings, some of which were similar to research in the United States and Turkey.

"I just thought that I want to help teachers who are already teaching or find out what their stories are. So that's what I did for my doctoral thesis."



Dr Julie Whyte

Although Julie specifically sought participants in Hawke's Bay, her search extended across the whole country as some teachers were not keen to talk about their maths anxiety.

She found 12 primary school teachers who were prepared to take part in the study and be interviewed.

"The 12 teachers that self-reported as being maths anxious identified specific teachers that had impacted on their mathematics learning and understanding and their feelings towards maths."

"Three of them also identified parents, but the main focus that came through was it was classroom experiences as students that led to their anxiety around maths."

All of her sample group said that they were maths anxious before they started teaching. "One person in particular said she delayed her primary teaching qualification."

Julie says the teacher stated that she did not want to work with older children because the maths was "putting her off" but decided to "feel the fear and do it anyway". The teacher eventually got her primary teaching degree.

However, Julie's research found that the teachers came up with strategies that they could use to try to manage their maths anxiety, including limiting the level of their teaching to junior classes where the maths equations were not too hard.

"In some ways they've managed their anxiety because they are still teaching maths, though their belief in themselves keeps them away from teaching more senior students."

Julie found that considerable time was spent by some of her participants to prepare for their maths teaching. They were quite averse to mathematics, but this preparation meant that they gave considerable time to interacting with maths.

"One of them said her husband did not think her hourly rate was very high because of the long hours she put into preparing for her maths lessons."

The respondents also spoke about their brains shutting down when confronted with maths problems.

"They can't work out the basics of seven plus what equals ten. A teacher in a professional development environment couldn't work out that seven plus three equals ten."

It was not just teaching maths itself, but the anticipation of teaching it that caused anxiety. When possible, teachers were coming up with strategies to avoid teaching maths if they had an opportunity to manage their anxiety.

"If something new was added to the timetable - maybe Harold the Giraffe and the truck came along to do life ed - then they would shift maths to that time so that maths was the subject that was dropped that day."

Other strategies include scheduling maths for when there was not enough time to get into it deeply, scheduling less time for maths, or only focussing on numbers and statistics and ignoring algebra or geometry.

Some participants distanced themselves from teaching maths by utilising book work, providing videos to watch, or creating maths games to play. They encouraged children to do these tasks independently of them.

"I thought that professional development would be beneficial for teachers experiencing maths anxiety. However, I learned that this was not the case for many participants. They were worried that their colleagues would find out that they were 'dumb' at maths. Maths anxiety became their focus, so they weren't able to interact with the mathematical ideas that were being shared. They often missed the opportunity to develop understanding for and of maths. One participant was not able to answer the question 7 plus what equals 10 in a PD situation."

Interestingly, many participants demonstrated a willingness to initiate self-directed professional learning in their own time to enhance their understanding of mathematical concepts, along with developing their mathematics teaching practice. They gave of their own time to interact with maths that they held negative dispositions towards

The teachers in the survey did feel guilt that they were depriving their students of valuable maths learning, but there was also an element of self-care in what they did.

"There is the guilt around it, but many of them taught in the lower levels because they thought that they would do a better job of teaching there rather than putting their 'non-mathematical brains' up against older children."

"They could handle that maths so that's that ethic of care that they show towards their students by trying to manage their anxiety, but also assisting the learners as best they can."

"One of them actually said: 'Well, I can't teach higher up because they'll know more than me and I wouldn't be able to teach them.'"

Julie also found that not all participants developed maths anxiety in primary school, with six of them becoming anxious in secondary school and one even at a tertiary level.

The interviews for the study were done over Skype and face-to-face, with Julie travelling to speak with some participants.

All twelve of the teacher participants developed mathematics teaching anxiety as well as their own anxiety.”

“Maths anxiety is a personal thing and they’re concerned about their ability to do the maths. In maths teaching anxiety, they’re concerned about supporting the learning of others and they have a bit of uncertainty around if they can do it or not.”

Julie is planning to use her research findings in a journal article and to do presentations on it as well.



Associate Professor
Emily Nelson

An exhibition showcasing findings from Learning in Nature research may have been postponed by a COVID-19 Lockdown in late 2021, but the project has highlighted the benefits of outdoor education and nature connectivity.

The collaborative research project between EIT and University of Waikato researchers, focused on how EIT, schools and the local community use the Ōtātara Outdoor Learning Centre (OOLC), an active living outdoor laboratory on EIT’s Hawke’s Bay Campus in Taradale, below the Ōtātara Pā.

The OOLC is an innovative collaboration between EIT, local hapū (Ngāti Pārau), central and local government agencies (Te Papa Atawhai/ Department of Conservation, Hawke’s Bay Regional Council), and local environmental groups that include Predator Free HB, and EnviroSchools. Funding for this initiative was provided by the Air New Zealand Environment Trust who remain a partner in the project.

Associate Professor Emily Nelson, who is a researcher and EIT’s Programme Coordinator of the Bachelor of Teaching (Primary), co-led the project with Professor Bronwen Cowie, Associate Dean of Research at the University of Waikato. The team also included Chelsea Sellars, a member of the Bachelor of Teaching (Primary) teaching team and current doctoral candidate at University of Waikato.

The first phase of the research in 2019 saw interviews being held with lecturers, management and anyone involved with the development of the outdoor space. Questions were asked about why they were interested in the space, why nature was important to them and how they saw it fitting in to their work.”

Phase two of the project has seen it move from the participants’ starting points to an investigation into how people are using the space, using a photo voice approach. The user groups were invited to take photos that represented their valued experiences, learning and nature-connectedness with regards to their time at the centre. Each participant spoke about their photos, why they took them, what they mean and what it was like learning in nature.

Participants in the project included staff and students from EIT's Education, IDEASchool and Primary Industries schools as well as a local primary school supported in the space by Predator Free Hawke's Bay.

The work was meant to be showcased at an exhibition in 2021, which had to be postponed because of COVID-19. The exhibition was going to feature each person's photo or drawing with a QR code going through to an audio recording of them talking about their work in the space.

"We were 48 hours from sharing this research as a photo exhibition at EIT but with the Level 4 lockdown this event was postponed," says Emily.

However, Emily and Bronwen have written two papers on the project, which they also presented online at the Australian Association for Research in Education (AARE) Conference in November 2021.

"One was on the Ōtātara Outdoor Learning Centre as a palimpsestic landscape that offers a time capsule of curriculum possibilities for all age groups, while the other was on the visual data nuggets we have produced as part of our image-based research approach," Emily says.

The findings of the research are certainly encouraging for proponents of outdoor education and use, with many of the participants expressing a connection to their surroundings.

"What we found was that visitors, be they students from nearby Bledisloe School or even our own students, have made the outdoor learning space their home. A lot of them originally did not know it was there, but now they view it as part of their community."

"When the children go up there, they are in nature, they like it, and it is good for them. Even the teachers say the space itself has a really strong wairua (spirit) and they feel very relaxed as soon as they get up there."

Emily says one thing that was noticeable was that the school children did not get bored even if they visited the space multiple times. They reported looking forward to visiting spots up in the OOLC that they haven't been to before.

"The children and even some of our EIT students spoke about how nice it was to be outside and to have the sun on them."

Emily says that participants in the study also spoke of having different experiences each time they went to the OOLC.

"We were talking to the teachers at Bledisloe about what we call the pedagogy of first encounter, that the teachers themselves don't want to rob the children of that experience of being up there unstructured."

"They felt like it was really important for the children to have free reign to explore on the first visit, but then the next time they could be more purposeful."

The concept of being observers of the nature around them was one that the children grasped quickly.

"The children talked about putting a trap up there and I thought it was rather 'old school' trapping animals in primary school' But, it wasn't! They put an ink pad down so that the insects and small animals walking across would leave the footprints. These kind of activities just build in that layering."

"An important point is that anyone going to the outdoor space has to come on to EIT's campus. This is the first time that many of the school children have been onto our campus, and I think they have realised that they could go there as adults."



Dr Noor Alani

"So, by opening up that space and introducing the children to outdoor education, we are developing future students for EIT and cementing our place in the community," says Emily.

Emily and Bronwen are preparing a report on some of the ideas that have come out of the research, with the aim being that these could be used to further develop the OOLC.

The Learning in Nature exhibition, which was postponed in 2021, is due to be held on EIT's Hawke's Bay Campus in 2022.

A Senior Academic Staff Member in EIT's School of Computing, Dr Noor Alani, was involved in a study last year to investigate the use of social virtual reality (VR) as an alternative to video conferencing technology for student-led presentations.

Noor conducted the research with Associate Professor Emre Erturk of the School of Computing and postgraduate student Brad Taylor to investigate and analyse learning styles and needs of different cohorts of learners using digital media platforms.

Noor and the other researchers felt there was a gap in research regarding student experiences and attitudes on giving presentations in a social VR environment compared to video conferencing.

The research design was quasi-experimental and collected data and analysed the relationship between the platform for delivering student presentations and participants' attitudes and experiences for immersive tendencies, presence, and social presence.

The sample group for the survey was about 20 post and under-graduate IT students at EIT's Hawke's Bay Campus.



Associate Professor
Emre Erturk

The research hypothesis was that students would have favourable attitudes towards presenting in a social VR environment compared to video conferencing.

Noor, who won the EIT Teaching and Learning Innovation Award in 2021, says that social VR is an interactive tool that “tries to close the gap in the online environment”.

“It makes you capable of doing a lot of things compared to the classic 2D environment. Normally when you have a screen in front of you, everything is two-dimensional. However, we found that students are more engaged in the 3D environment, where not only are they represented in 3D objects, but they can also try many activities they cannot do in class.”

“So that social virtual environment provides the lecturer with positive interaction with students, in terms of delivering course materials as well as observing what students like and do.

He says that observing students’ interactions in the classroom is normally quite time-consuming in the real world, while video conferencing shows the speaker who is talking at any one time, and this tends to keep the lecturer occupied.

“With social VR we have a more learner-centred approach, so we can just give the learner the flexibility to navigate through this 3D world or this virtual world, and then they can express their learning needs. You can imagine this environment as an online or virtual campus.”

Noor says the platform allows for ease of movement and more creativity to capture learners’ engagement.

“You can move to the lecture theatre or the cafeteria or anywhere else. This cannot happen in a classroom environment because students are bounded by classroom regulations.”

The research showed that students were able to work at their own pace and on the aspect of the task they wanted to do at any given time.

“There is more flexibility as we show the students their online work and they can then pick up whatever they want to learn. It is all there in the social environment virtual board. The most significant element in this new environment is how tasks are allocated to learners and what class objectives need to be met.”

Noor says the researchers are still investigating other factors, like lockdowns, the traffic light system and the impact of COVID-19 in 2021.

“We are trying to see how we can best serve this kind of social environment including ways to keep the students engaged, including online quizzes, and hands-on activities. It is about trying to create a friendly and family environment.”

The success of the project has allowed EIT to use the research in a practical way.

“We have some online offshore programmes, including a Bachelor of Computing Systems being offered to international students in China.”

Noor is also involved in a research project that is an interactive welfare application for vet nursing. The project team includes EIT Executive Dean and Professor of One Welfare Professor Natalie Waran; Associate Professor Rachel Forrest; former Veterinary Nursing Lecturer Dr Leena Awawdeh; and Teacher-Educator Helen Stewart-MacKenzie.

The aim of the project is to use Early Learning Centres (ELCs) in Hawke’s Bay as a regional model to ascertain the attitudes, awareness and understanding regarding responsible pet guardianship (kaitiaki) of both staff and children. The team has also been working on a novel augmented reality (AR) game that promotes One Welfare. Another aim is evaluating the One Welfare Game’s effectiveness at improving the quality of life for animals in ELC settings; and ELC staff and children’s knowledge about animal health and welfare needs.

Noor says introducing children to animals in an online environment makes it a safer experience and more productive in finding out how the children would react.

“Some children don’t know how to interact with animals and any inappropriate interaction (e.g. pull tail) may lead to negative experience.”

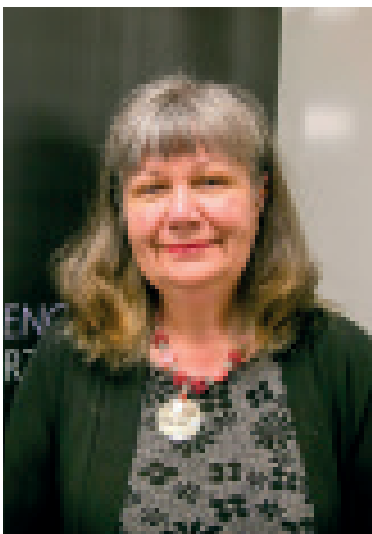
“This application shows you exactly how the children will be in the animal welfare environment and produces a report at the end of the process.”

The game is in a design phase and has resulted in a prototype game that can be downloaded and played via touchscreen devices. All of the content and feedback provided within the game is based on current scientific research. A rabbit was chosen as the animal in the prototype game as it is a common ELC pet.

The study is continuing in 2022.

What started out as a small research project born out of an EIT Auckland lecturer’s concern for the wellbeing of her international students, has become a mentoring blueprint for foreign learners across the Te Pūkenga network.

Dr Dobrila Lopez, Principal Lecturer, Information Technology at EIT’s Auckland Campus, started the programme in 2018 to help first year students settle into their new lives after becoming concerned about the welfare of students from a range of countries, including India, China, Vietnam, Philippines, Russia and Ukraine.



Dr Dobrila Lopez

Her desire to offer support, and to some extent, comfort, to these students in a strange new land stemmed from her own experiences.

“I’m also an immigrant and I remember how difficult it is to not have anybody to ask about anything. And you don’t even know where to go to ask. That is not to say that EIT’s Auckland Campus does not have absolutely excellent people working in academic support, administration support, pastoral care, and in the library, but often it can simply not be enough for someone who is feeling overwhelmed.”

Dobрила’s main focus was helping her cohort of students, but the rich trove of research data led the Ministry of Education to provide the EIT researcher with a grant to create a model for other polytechnics.

COVID-19 delayed the progression of this template which will enable ITPs to ensure that students are able to be in an environment where they can concentrate on their studies and have a healthy social life. The EIT study found that studying in another country with the lack of an established support network and cultural differences in day-to-day life can leave a student feeling vulnerable. It also found that students wanted to talk to someone they could identify with, often older students from their country or region. Thus, the idea to create a mentorship system took root.

Dobрила approached other ITPs, often through their Schools of Computing, which is where she had the most contacts. A collaborative peer-mentoring group was established in June 2020 and included participants from NMIT, Unitec, MIT, UCOL, WITT, Ara, Toi Ohomai, SIT and EIT.

She says the hard work and effort by the ITPs, mentors and mentees was worth it.

“We have completely finished the national project and submitted our final report to the Ministry of Education.”

Dobрила says one feature that has been added to the model is an introduction to indigenous Māori culture.

“We are also keen to see our mentors communicating freely with new students coming through even when they have moved into the workforce. This will help them in their transition.”

Dobрила says what the initial and extended study has found is that while there are different types of mentorship available, there was one key ingredient that new students wanted.

“They need to have somebody who is on the same level with them that they’re comfortable to talk to. Often that manifests itself in choosing someone from the same country or region.

“It has become clear to us that this programme has two sides - there’s a research side and an operational side.”

“The operational side never stops, so we have to keep recruiting mentors and educating and preparing them for the role. Often we lose all our mentors at the same time, so we need to train up a new group rather quickly.”

While the methodology of the original programme did not change, the different organisations did approach it in their own way.

At the heart of it all was the aim of ensuring international students were able to feel comfortable in their new environment and get on with the task at hand - studying for the qualification they wanted to get.

“We have to use all information to improve our own educational process to make those learners feel accepted and feel happier. There are wonderful programmes on the ITPs’ campuses, but we have to go beyond that and hear the students’ voices. Mentorship is about having a friend.”

Not only did COVID-19 delay the research project, but it also changed the parameters of the research. With New Zealand’s borders closed, not many international students were coming to Auckland. However, that did not mean that they were not enrolling in EIT’s many and varied programmes. They were simply doing it online from home.

Dobrila says even though the students are not physically coming into a new culture, they are still experiencing that culture online.

“Not only are the students experiencing a new way of doing things, but they also want to know about our culture so that if they are able to come to New Zealand, they will know about it. They still want to know the questions about food cost, where they should live, job prospects and all the things people would ask if they were coming to a new country.”

As a result of the MoE project, a monograph - with the title: Mentoring practices and initiatives across Te Pūkenga was published in January 2022.

Dr Pii-Tuulia Nikula, Principal Academic Staff Member in EIT’s School of Business, has been researching International student recruitment agents for many years and is regarded as an expert in the subject. That expertise has been used in a new book entitled Student recruitment agents in international higher education: A multi-stakeholder perspective on challenges and best practices.

Pii-Tuulia is editing the book with Dr Iona Y. Huang, Senior Lecturer at Harper Adams University in the UK; Vincenzo Raimo, Adjunct Professor at Nanjing University of Information Science and Technology in China; and Eddi West, Assistant Dean of International Strategy and Programs at San Diego State University in the United States.

The book looks at the issue from agent management and other stakeholder perspectives and considers emerging trends and other topics.

"We have a number of chapters being written by different stakeholders reflecting perspectives from agents, students, institutions, regulators and government. We also have a large number of different countries that are covered in the book."

Pii-Tuulia says this is the first book to focus solely on this topic.

"We believe it will be something that will be used as a reference work for both researchers and practitioners as well."

Pii-Tuulia says that on the whole New Zealand is doing better than most countries in terms of systems, policies and regulations.

"Many countries don't have any Government regulation at all, as we have in New Zealand. So at least we have some kind of minimum criteria that do exist."

Vignette

Surej P. John

EIT Lecturer Surej P. John has built a reputation as a marketing guru, having plied his trade as an academic and a specialist across multiple countries. Surej, who is originally from India, is now a Senior Lecturer in Marketing in EIT's School of Business, following on from a storied career in India, Thailand and Waikato.

Surej is an academic through and through and he loves marketing and research that focuses on marketing practices, be they good or bad.

"My interests are related to marketing in various management fields and also looking at digital marketing. These days I'm focusing mostly on retailing and higher education marketing."

"Research is important for an academic because we need to know something before we can start teaching others. Research helps me to understand more about my subject area and that helps me to give better examples in my class."

Surej says that apart from research building a body of knowledge, it also leads to connections with other researchers and an understanding of how different cultures view the same concept.

"Collaborating with others from multiple countries is a really great experience which makes me enjoy researching."

It has been a long academic journey for Surej, who got his first degree - A Bachelor of Engineering (Instrumentation) from Culicut University in India in 2002. A move to Assumption University in Thailand saw him obtain his Master of Business Administration (Marketing) in 2004 and then become a



Dr Surej P. John

Doctor of Philosophy (Information Technology) in 2014. From 2007 until his immigration to New Zealand in 2015, Surej worked as Marketing Lecturer at both Assumption University and Silapakorn University (Adjunct Lecturer) in Thailand. In 2014, Assumption University appointed him as Assistant Professor of Marketing.

Friends of his were encouraging him to move to New Zealand, but he felt it was a big decision to uproot his wife and son come to the “end of the world”.

“I looked at New Zealand on the map and it was far away, but because my friends were applying for residency here, I thought I would too to see what happened.”

It was a trip to New Zealand to present a paper at an AUT-organised conference that convinced him.

“As soon as I entered New Zealand, I loved it, and I loved the way the people are. I immediately resigned my job there in Bangkok and I came here over Christmas in 2014 for good. Now we are New Zealand citizens, and this is really our home now.”

Surej’s wife Bibimol is a healthcare assistant at what was known until recently as the Hawke’s Bay District Health Board (DHB) and his nine-year-old son Alex is enrolled in Reignier Catholic School in Taradale, Napier. However, before coming to Hawke’s Bay, Surej was a Marketing Lecturer in the School of Management and Marketing at the University of Waikato. He stayed there until 2017, before starting in his current position in EIT’s Faculty of Commerce and Technology.

Surej has an impressive list of outputs, including research papers and book chapters on different aspects of marketing.

One of his most recent book chapters was Social media in FMCG marketing: Understanding how supermarkets use Facebook during the COVID-19 pandemic which he co-wrote with EIT colleague Richard Walford, a tutor in the School of Business.

“We evaluated the supermarkets’ performance in six areas - social media involvement, interaction with customers, social media to create intimacy with customers, influence, capturing customer insights and impact.”

“One or two of the six supermarket chains performed relatively well compared to the others. However, there were lots of areas to improve on because during the lockdowns, people were panicking and did not know what to do, so they went to social media.”

“This meant that social media played an important role in controlling customer choices and providing them with the right information,” says Surej.

He says that there may be a possibility that some supermarket chains were complacent because as essential services during lockdown, they knew people needed them.

“One of the brands performed relatively well because they had three to four posts to their social media channels every day. Others were only posting every couple of weeks or even once a month because they knew that customers would show up.

“It would’ve been much better if they could use these digital channels to provide kind of information and kind of day-to-day updates about what’s happening. Even in this day and age, social media marketing is an area where businesses in New Zealand are lacking because they simply don’t consider these kinds of channels.”

Surej also had a research article published online in FIIB Business Review. Once again his co-author was Richard, along with Joseph Purayidathil from Assumption University. The article was called Factors affecting the adoption of social media in marketing of higher education: An empirical analysis.

This study, which was published in 2022, examines the persuasion process involved in social media marketing (SMM), particularly in the higher education sector. Based on the theoretical foundations of the information adoption model, a conceptual model of elaboration of SMM communication is developed and tested.

Surej says the survey, which was self-administered, was conducted among a sample of international student travellers in New Zealand.

“It examines the influence of argument quality, source credibility, audience involvement and audience engagement on their attitude formation and decision-making. The study particularly examines the mediating effects of audience involvement and engagement in SMM communication.”

He says that the results suggest that social media content quality is a significant predictor of online users’ transportation, identification and parasocial interaction effects.

“Despite there being additional evidence to support the arguments over social media, source credibility is found to be a strong influencer of an international student traveller’s cognitive, emotional and behavioural engagement dimensions.”

“Further, it is evident from the study that there is a strong correlation between cognitive engagement and attitude formation in SMM.”

Surej was also involved in a presentation COVID-19 implications for marketing of higher education: An exploratory study at the Australia New Zealand Marketing Academy Conference in 2021, along with colleague Richard and Jaikaran Narula, also of EIT.

The study analysed the service design and delivery factors that have the highest impact on the overall satisfaction of students and staff in a tertiary education environment. The study conceptually built on the theoretical foundations of service marketing mix, compared and contrasted the factors influencing the service quality and satisfaction of major stakeholders of higher education.

"Results suggest that the 6Ps of service marketing: product, promotion, place, people, process and physical evidence are important in marketing higher education," says Surej.

"Factors including course structure, teaching effectiveness, academic mentoring and support, engagement opportunities, and overall learning experience were critical to satisfying student customers while educational technology, computer self-efficacy, management support, student engagement, learning opportunities, recognition, etc. were found to be the key motivational factors for business academics."

"Our findings can be used to improve the quality of higher education particularly over blended platforms in the post COVID higher education environment."

For Surej, the research does not stop as he believes there are many digital improvements in terms of artificial intelligence or virtual reality that are happening these days.

"We can use this for marketing. For example, EIT can use virtual reality to attract international students.

"This is a good opportunity for international students to sit in the comfort of their own homes and then they can see what the EIT campus looks like. Marketing of higher education is something that I'm really keen on and this type of artificial intelligence application is something that marketers can use," says Surej.

Creativity and Curation

A significant EIT archiving research project being coordinated by Māori and Indigenous Research Professor David Tipene-Leach gained momentum in 2021 and formed the basis of an exhibition called *Mārama: Manuscripts with Memory, An intimate audience with Ngāti Kahungunu tīpuna*.

The exhibition was held at Te Ara o Tāwhaki, EIT's Marae in the School of Māori Studies on the Hawke's Bay Campus, in June 2021.

The exhibition showcased important research by EIT's Professor David Tipene-Leach and Te Reo Māori researcher and archivist, Waitangi Teepa.

In December 2020, the researchers also won the prestigious Judith Binney Writing Award which is given by the Judith Binney Trust to support research and writing on New Zealand history. Judith Binney was a renowned New Zealand historian. The award ensured that the project that sought to preserve historical Hawke's Bay Māori manuscripts could continue.

David says: "This is the age of the 'Repatriation of taonga Māori' and we ask: 'Where do Ngāti Kahungunu manuscripts, documents, records, taonga-atuhi and other taonga archived and curated in museums and libraries around the country rightfully belong?'"

The manuscripts on display at the exhibition consisted of letters and papers from two significant collections that have been passed down through the generations of two Māori whānau. The project is personal for David as one of the collections is of his own family's papers.

It includes approximately one thousand letters written between 1860 and 1890 to Henare Matua. Matua was the leader of the Hawke's Bay 'Komiti', which was based around several mid to late-19th century rangatira in the area who banded together to both prevent land sales and overturn land sales that were clandestine, fraudulent and damaging to local hapū.

The group went to court to "repudiate" some of those land sales and as a result, local landowners called them the Repudiation Movement. Henare Matua was David's great, great grandfather's oldest brother.

The other collection, part of which is in the caretakership of local historian Pat Parsons, concerns John Thomas Blake, a Māori Land Court translator, who kept two records of the cases he translated - one for the judge and the other for his personal collection.

The Hawke's Bay collection was split in three bits - some in the Hastings Library, some deposited with Pat by the Blake family - and many pieces are still in the wider Blake family.

The Tipene Matua and Blake whānau attended the exhibition.



Professor
David Tipene-Leach



Waitangi Teepa
Archivist

David says: “The words ‘our own memory’ have become the common truth of post-Settlement Iwi around the motu - particularly where there is no Tribunal Record to rely on. We in Ngāti Kahungunu have our own separate oral histories and Crown historical record. But we have scores of whānau who are caring for caches of valued manuscripts.”

“This exhibition was about what is possible with your manuscripts - how to care for them so that they survive until one of your whānau is able to retrieve the mātauranga contained therein.”

David says what became clear after the exhibition and conference was that more events like this are needed.

“It became very clear that there was no professional conference for this group of people, including Māori archivists and curators.”

“We are looking at developing our thinking a bit more and aiming to run it more as an abstract-based conference.”

David says that the next issue to deal with in 2022 is where to house the archives and also about making them accessible to iwi members.

“What we want is a place that whānau can go with their records to make sure that their records survive.”

Creating a book about the carvings at EIT’s wharenuī, Te Ara o Tāwhaki is a research project that two Kaiwhakaako (lecturers) at EIT’s Te Ūranga Waka have been working on for a number of years.

Petera Hakiwai and Rocky Ropiha teamed up with the-then EIT Executive Director Māori, Tuhakia Keepa, who has since left EIT but is still involved in the project.

EIT’s marae was officially opened on 29 October 1994, but the aim had always been to complete the interior of the wharenuī.

Carvers spent two-and-half-years, designing, painting and carving the new pou, kōwhaiwhai and tukutuku, which were officially revealed and blessed on 12 February 2020.

Carver Te Rangi Robin was commissioned, along with Charles Paringatai and Emanuel Dunn, to design and work on pou whakairo for the exterior of the wharenuī and paepae (threshold) as well as other structures on the marae.

Petera says the decision to embark on the project was with a view to creating a resource and record of the carvings in the wharenuī.

COVID-19 and Tuhakia leaving EIT had meant meetings about the project had not been as frequent as they would have liked.

“It was really exciting because we conducted interviews with the carvers, which turned out to be a really cool process. What I enjoyed was that we



Rocky Ropiha

made a decision that every time we caught up with our carvers, we would take lunch over.”

“This was because we didn’t want to come across like we were trying to bleed them for information, but rather to have a relaxed chat and make them feel comfortable.”

“We would chat to them about their systems, about why they chose a particular style.”

Petera says that the interviews with the carvers took place while they were working on the wharenui and since then the researchers have been “trying to make sense of the information.”

“We are analysing the information we have and putting it into a structure that will be easy to use and easy for our students and staff to read.”

Petera says that a lot of his research outputs in 2021 involved delivering guest lectures to organisations.

In September he was invited by NZQA to facilitate a session on Māori proverbs in Wellington to celebrate Te Wiki o te Reo Māori - Māori Language Week. His lecture was entitled Whakataukī/Whakatauākī and explored how the use of proverbs illustrates one’s command of not only the language, but their surroundings.

“A lot of Māori proverbs derive from the environment and sometimes have more than one meaning. As the use of the language becomes more common, there has been an uptake in the utilisation of Māori proverbs.”

“Widespread use of the language and proverbs is great for this country and Māori, however using the language and proverbs without proper understanding can create a little bit of confusion, and sometimes, embarrassment,” says Petera.

Other lectures he has given have been about his language journey and how he grew up with te reo; how his children have been raised speaking te reo; and how te reo Māori has taken him overseas.

Steve Gibbs has spent many years using his art to reach back into his ancestral past and to explore his love for the sea.

Steve, who is Associate Professor at EIT Tairāwhiti’s Toi Houkura Māori Visual Art and Design School, had been poised to achieve his PhD, but illness has set him back. At the time of going to print for this publication, Steve was recovering well. His research achievements for 2021 are recorded here, based on an interview in March 2022.

Steve’s PhD thesis traced the story of contemporary Māori art going back to the 1700s. Steve research journey started with initial research of a meeting between British explorer Lieutenant James Cook and local Tūranga Māori in



Associate Professor
Steve Gibbs

1769. The meeting took place on board Cook's ship, the HMS Endeavour, while it lay becalmed off Whareongaonga on the East Coast south of Gisborne.

This encounter took place after a bloody three-day period where nine local Māori were killed by Cook's men. The fourth day marked the first peaceful engagement with tangata whenua.

Steve's focus - as an artist - was a number of hoe waka (canoe paddles) with their intricate designs and painted patterns that had been taken from these shores, along with other taonga. This research has also formed part of Steve's thesis.

In total 29 hoe, along with other taonga, were found in museums in Britain, Germany, Italy, Austria and the United States. Of the 29 hoe found, it is ascertained that 23 can be identified as belonging to and having their origins in Tūranga Māori.

Steve and the tangata whenua of Tūranganui a Kiwa and Te Aitanga-a-Hauiti negotiated with five museums in Great Britain and Germany, who agreed to loan the taonga for an exhibition at Tairāwhiti Museum in Gisborne. The museums that agreed to the short-term loan are The British Museum; Pitt Rivers Museum, University of Oxford; University of Cambridge Museum of Archaeology and Anthropology; the Great North Museum in Newcastle; and Hancock and Tübingen University Museum, Germany.

Leading the project to facilitate the loan was Hei Kanohi Ora, an Iwi Governance Group, consisting of tangata whenua of Tūranganui-a-kiwa and Te Aitanga-a-Hauiti and was supported by Eastland Community Trust, Te Puna Tahua Lottery Grants Board and Air New Zealand.

The taonga were accompanied on their journey back home to New Zealand by three curators from the British Museum; Pitt Rivers Museum University of Oxford; and the University of Cambridge Museum of Archaeology, who helped unpack and install them.

The exhibition, Tū te Whaihanga - a recognition of creative genius, which was co-curated and designed by Steve, opened in October 2019 and was due to be on display until October 11, 2021. However, because of COVID-19, the exhibition was only due to close in May 2022.

In December 2021, an exhibition called The Path opened at Hastings City Art Gallery, featuring visual artists, a writer and a documentary producer for whom surfing has been part of their life journey.

The Gallery's website says that although the artists featured in the exhibition are connected by surfing, they weren't asked to create or exhibit 'Surf Art', but rather to interrogate the crossover in their passions, and contemplate

through their practice and discussion the connection between these two creative and formative activities.

“The Path is a celebration of the work of surfing artists and surfing in general, and during its run a number of events will highlight this passion for the ocean, including a documentary screening, a book launch and a panel discussion.”

Steve, who has been an avid surfer and wave skier, was invited to exhibit a piece of work and also give a floor talk at the gallery.

His talk was due to be held at the opening in 2021, but COVID-19 meant it was postponed until January 2022.

“The important thing is that the exhibition featured surfers who do art. I was part of a large group of people who were surfers. My particular kōrero was about tangata whenua and our connection to the sea.”

In his visual presentation and lecture, Steve said his relationship to the sea is reflected in “much of what I do and who I am”.

“My creative work is in response to my genealogical connections to Tūranganui-a-kiwa. Everything I do ties me to my mana whenua and mana moana (the land and the ocean). Tairāwhiti is the first place that greets the sun as it climbs out of the South Pacific Ocean. My creative process is inseparable from this natural phenomenon.”

He also spoke about his PhD and the research journey he has been on. He referenced the series of paintings, drawings and research related to these hoe. The waka hoe are decorated with design systems that are the oldest extant examples of customary kowhaiwhai (customary Māori pattern painting).

Erena Koopu is well known as a Tairāwhiti artist and researcher in her field, but now she has branched out to performing arts.

Erena, a Senior Lecturer in Māori Visual Arts at Toi Houkura on EIT's Tairāwhiti Campus, started off 2021 catching up with work delayed by Covid-19. An exhibition that had been due to be held in May 2020 was delayed until February 2021. The exhibition was called He Kirimaaku and was held at ArtsPost, Waikato Museum.

The inspiration for the show was renowned Waikato composer, Kirimaaku Kihi, who is well known in Māori creative and cultural circles. Erena took Kirimaaku's music and used it as a stimulus to create twelve pieces of work. For Erena, the exhibition was personal - Kirimaaku was her teacher and an “inspirational woman”.

Kirimaaku is a teacher at Te Wharekura o Rakaumanga, where she teaches tikanga and te reo Māori, as well as waiata and kapa haka.

"I grew up with her and with her children. We spent a lot of time together and she inspires me."

"Kirimaaku is from Waikato, so a lot of the content has to do with that area where she grew up. Her work is based on life along the Waikato River, the Kingitanga movement and the different activities that happen on the water as well. She is a teacher so there are references to the rangatahi of that area."

While Erena drew her inspiration from the content of the composition, her artistic interpretation was informed by conversations with her mentor.

"We had lots of wānanga about what was going on at the time of each composition, how she drew inspiration in those compositions and how she functions as a composer."

"You really have to have that space with the composer because you can't just go ahead and do it without."

Erena says she was pleased with the public reaction to the exhibition.

"It was a sold out show and just a really great celebration of Kirimaaku. Different galleries work differently, and it was a really good show. It was a great opening with lots of Kirimaaku whānau as well as the whānau that I grew up with in Waikato. That was pretty special actually."

"It was also an eye-opener for the whānau up there because not many of them had been to exhibitions and exhibition openings. We take it for granted here, but it was very new to them, and it was quite cool to see."

The exhibition, no matter how special, was one of many that Erena has held, but it was her next piece of artistic work that took her well out of her comfort zone.

The project involved Erena playing the lead character in a Māori musical, written by Ani-Piki Tuari and her brothers, the Tuari brothers.

The play was called Whakapaupakihi and formed part of the Tairāwhiti Arts Festival.

"The narrative had a very Tairāwhiti theme, and while it was based on real characters, it had been changed around to appeal to the rangatahi of today."

Erena says that any art or research she conducts has to push her out of her comfort zone.

"I figured out that I really love to sit in a space of fear and excitement. That combination is often what we need to make ourselves better."

"I have a lot of respect for actors, and it was good to work with those amazing people."



Erena Koopu

For Erena, her art and research continues, but she is also mindful of her duty to pass on her knowledge and skills to her students.

“I think it is really important for students to know that outside work, you can engage in other creative activities. It is about becoming multidisciplinary.”

An IDEASchool Lecturer has transformed two 100-year-old Japanese garments that she found at a second-hand Japanese clothing importer into a jacket, documenting the process along the way.



Dr Mandy Rudge

For Dr Mandy Rudge, all clothing has a story and over the years she has developed an interest in kimono and other Japanese clothing.

“There’s a lot of research, mostly by artists, who talk about that sense of absence in second-hand clothing - ‘There’s a missing person here.’ And so I picked these two garments up and felt some connection with them, and then set about remaking them into a jacket. So it’s the story of that process and the research that I did around it.”

Mandy’s latest research will be presented in a paper entitled An auto-ethnography of the re-making of two ‘100’ year old Japanese garments.

The paper documents the use of a user-maker stance (Fletcher, 2008) and an auto-ethnographic method (Adams et. al, 2007) in the re-making of Japanese second-hand garments. The user-maker stance centres around six key aspects: sustainability (as opposed to disposable fashion); quality of clothing (not quantity); need (not want); making (not having); responsibility for the long term care of a garment and a focus on being in and with clothing as opposed to owning it.

“In short, what I make, I wear,” says Mandy.

The two items, bought from the Asia Gallery in Auckland, were an unfinished jacket and a pair of pants for a short person.

“Something about a small second-hand Japanese jacket, barely visible on a rack full of flowing and flamboyant kimono, spoke to me. It looked out of place beside all its opulent neighbours and hung limply on its hanger giving it a decidedly tired appearance.”

“Closer inspection revealed that it was not just a small jacket, but underneath the jacket was an equally small pair of hakama pants. The installation artist Christian Boltanski (in Rosenbaum-Kransom, 2011) believed that second-hand clothing generates a sense of melancholy, a sadness at being abandoned, and both of these garments certainly did that.”

While it was difficult to ascertain for sure, Mandy’s research leads her to believe that the items could be about 100 years old.

The fabric in the garments have been printed in chrysanthemum patterns, which are key because they are a symbol for being Japanese. The pants

appear to have been worn because they are faded, but the jacket wasn't, which means there are different colours in the fabrics.

"I find it interesting that in the time of fast fashion, there's this fascination with something that's a hundred years old. I wear this jacket, and it's still going, still working as a piece of fabric. It's not precious, it was never designed to be that way. It's got traces of the person on it."

"There's a lot I don't know and a lot that I'm making conjectures about, but that's the process that you work through when you are remaking something," she says.

For example, there's a blob of varnish on the back of the jacket and I just wonder, how on earth did that get on an unfinished jacket? You're guessing the best you can and you're trying to contextualise it in terms of a culture. But you can never be sure."

Mandy says her research methodology is auto-ethnography which describes and critiques cultural practices and explores the relationship of external and internal factors in research led creative practice.

"It is a method that acknowledges emotions and documents the untidy and the uncertain aspects of my remaking practice. Therefore, it highlights how much I adore silk, but means that I also wrestle with the fact that, according to Silkfabric.info, 6,600 silkworms die for every kilo produced."

"I know that by remaking I am saving garments from landfill. I am careful in my use of Japanese terms and learn all I can about the cultural origins of the garments I work with."

Mandy says that if the garments were made in the 1920s, this would have been during a time when Japanese women were able to enter the workforce more and earn money.

"There was this whole café culture that developed in Japan and women were living in a time of perhaps greater liberation than they had prior."

"Therefore, pants and a top, rather than a full kimono, would have been more acceptable for woman to wear. It was a time when women were wearing a blend of western clothing and Japanese traditional customary clothing.

Many questions remain about the person who made the jacket and pants, but for Mandy the connection with the garments runs deep.

"When buying an item of clothing, people often say how much they 'love' it, but the love I have for this jacket is a very different type of love."

She says she likes to think that the original owner was not only innovative, loved chrysanthemums and enjoyed the freedoms Japanese women

experienced in the 1920s, but that she would also approve of the love Mandy has given the garments.

“I also like to think that the jacket I made from them knows just how much it is loved.”

Vignette

Tom Pierard

Tom Pierard comes from a family steeped in music pedigree, but as a performer and researcher he is forging new territory and even, at times, questioning what music is.

The IDEASchool Principal Academic Staff Member (PASM) in Music Technology has been contributing peer-reviewed research since 2018 but has been a creative practitioner for about 20 years.

A dab hand on the drums, Tom’s main focus these days, apart from his day job of teaching the next generation of musicians, is researching innovative forms of musical expression and creativity.

“I just love thinking about music and teaching critically, both in my own practice and in the wider sphere. Music technology education is a relatively new field, so there are lots of areas for development. Commercial composition (specifically brand sonic identity) is also a major area of my research, and I enjoy that because it tends to be challenging and very diverse.”

For Tom, it is not about staying in the lane of traditional musical method, but rather expanding to use technology and alternative techniques to advance creativity. When does conventional music start, and software-enabled sound begin and is it still music?

Tom argues that it is.

His most recent research is incorporated in a chapter of a special edition of Teachers and curriculum, which is due out later this year. The study used in this chapter formed part of Tom’s PhD thesis.

The chapter discusses common learning practices of Digital Audio Workstation (DAW) users, and the dangers of superimposing conventional curriculum design when the learning style, participatory culture and multimodal affordances are inherently different. It draws on a recent study using a constructivist approach with secondary school students in New Zealand to creatively navigate ‘blocks’ in students’ autodidactic processes. The chapter offers initial ideas on how teachers can incorporate aspects of individual identity (e.g. cultural, social, and political) into DAW learning.



Tom Pierard

Tom says the research was about looking at designing a new kind of constructivist environment for software users.

"It's music related and what I was arguing was that there are young musicians who use software as their main kind of instrument, but what we have is a pedagogical approach that is superimposed from conventional instrumentalists."

"What I'm saying is that the fact that there are these differences with conventional instrumentalists and then young people who make music with software, means that that validates the argument for a more bespoke approach to curriculum design for software users."

Tom says that the important point to understand is how technology unlocks new forms of expression.

"I believe that art needs to reflect normal life and social circumstances. For a lot of people, it needs to be relevant, but in order for that to happen it needs to reflect the role that technology plays in our lives these days."

"I think that technology is more of an extension of artistic expression and if you omit it, you are in danger of alienating generations of people, or being closed off to it."

Tom's love for music goes back to his childhood and at the core is that he was exposed to music.

"A lot of my research has got this auto-ethnographic slant to it. I was brought up in a family that was very heavily involved in classical music and so I learned the cello, the piano and the violin at a really early age. When I was about thirteen, I started getting into heavy metal and I saw that as an extension of my identity."

Tom draws parallels from his own experience to restrictions placed on the younger generation.

"What I was encountering was music education being taught by teachers or the curriculum of narrative identity, but not my own narrative. And I think that that's another thing that has the risk of alienating young musicians these days."



Professor Matthew Marshall

Vignette - Doctoral perfection

Matthew Marshall

The rich history of classical guitar in New Zealand from the 19th century until now has been captured, probably for the first time, in a Doctor of Musical Arts (DMA) thesis by Professor Matthew Marshall.

Matthew was Head of EIT's IDEASchool until late 2021 and is now Dean of Arts at Sunway University in Malaysia. His DMA thesis, entitled The evolution of composition for classical guitar in New Zealand, was named as one of the University of Otago's Exceptional Theses for 2021. He graduated at a ceremony in Dunedin before he left for Malaysia.

Matthew, who is an internationally recognised classical guitarist, says his thesis required him to give four major recitals across three years, as well as a written component of about 60,000 words.

"The whole project took about four years, from thinking up the project in the first instance when I was still living in Australia through to completion. But, in a way you could say it started decades before that, but this was just the right time to document it."

"Learning the music was the easy part because I've done that my whole life. Choosing most of the repertoire was not difficult when it came to early performances because that music was already in existence. Where the pressure came was later where I commissioned compositions from leading New Zealand composers, because I had to learn that music in a very short timeframe."

In a bid to get an overall sense of the work, Matthew did not start writing the thesis until the final year.

"The early stages of my study involved me travelling around the country and interviewing about 20 key people who were involved in the guitar scene in New Zealand. I told those stories in my thesis."

"I detailed the influences of key musicians and how they contributed to the development of the classical guitar scene in New Zealand, which no one had covered before."

Those were heady days when the classical guitar scene was run by enthusiastic amateurs who organised guitar societies and concerts for professional musicians.

"I guess I grew up through that system, if you like, in the 1970s. So I'm a product of it. The people I interviewed were former guitar society officers, professional players, some composers who wrote for the guitar, and those who were particularly involved in the composition of music for the guitar," he says.

It was moving to Hawke's Bay to take up his role at EIT that led Matthew to an interesting discovery - New Zealand's first classical guitarist came from Hawke's Bay.

"A student, Frederick Puriri, who finished his Bachelor of Creative Practice last year told me about his relative Walter Smith, who was born in Nūhaka in 1883. He was New Zealand's first classical guitarist"

"He was part of a Mormon family that moved to Utah when he was about ten years old. He went to university there and studied classical guitar. The most amazing thing is that he started playing before even the famous classical guitarist, Andrés Segovia," says Matthew.

Walter Smith, who was a cousin of All Black great George Nēpia, returned to Hawke's Bay to teach at the then Māori Agricultural College - the first Mormon school to be built outside the United States.

"The amazing thing is this school was in Bridge Pa - about 1,500 metres from where I lived in Hawke's Bay. Frederick was able to give me photos of Walter from between 1915 and 1920 which added a rich and important touch to my thesis."

Matthew says that there is so much history that he has only "really scratched the surface".

"There's just so much more material in the library that I could sit there until I'm 100 years old and still not get through it all. So there's amazing, rich literature and resources available to the next generation of people who want to do that sort of research."

Where the thesis became even more personal was when Matthew had to tell the story of his involvement in establishing a repertoire of music by New Zealand composers through commissioning them to write music for him.

"It was interesting to find that of the roughly 400 or so pieces that are now considered significant enough for concert performance, I've been responsible for about 40 percent of that coming into existence."

He documented his interactions with composers and essentially discussed everything from inception through to the final product.

"I also had to write about the performances and my choice of repertoire. Some of the music was especially composed for these performances. The repertoire, across the four performances, was a chronology of music written for the guitar in New Zealand over the years."

"There was a fairly substantial self-reflection process that went on," says Matthew.

The key for him was that he did not see the doctoral study as a chore, but rather a chance to document his research over the years, including the music books he'd published.

Matthew says he appreciates the support that EIT gave him to complete the task and is also full of praise for his friend and Principal Supervisor Professor Anthony Ritchie from the University of Otago.

But, the research does not stop there, because Matthew plans to use the material he gathered from all his interviews with those who shaped the

history of classical guitar in New Zealand to write a book. The plan is to publish the book in 2023 and Matthew has already received an offer to publish it in Malaysia which will include worldwide distribution.

In the meantime, Matthew is encouraging others to research New Zealand's classical music history.

"There's just so much more. My thesis is already out of date because I have since discovered new information about other guitarists I didn't know about who visited New Zealand in the late 1930s and also made a significant contribution to music in our country."

Vignette

Parekura Rohe-Belmont

Parekura Rohe-Belmont (Ngāti Kahungunu, Rongomaiwahine) never thought that she would be pursuing a PhD. In addition to this achievement, Parekura is writing her PhD thesis in te reo Māori.

The kapa haka composer and Senior Lecturer, who teaches in the degree programme at EIT's Te Ūranga Waka, graduated with a Master of Māori Studies (1st class honours) at the beginning of 2021 and promptly enrolled in the PhD programme.

"There was a kuia in our cohort, who said, 'No, we're going to carry on. We're all in it together.'"

"I just thought if I don't do it now, I'll never do it. My whānau and my colleagues are all supportive."

Parekura has a long association with EIT, having begun her undergraduate studies in 1995 and completed a Bachelor of Arts (Māori) at EIT, before going on to complete a Bachelor of Arts in Māori Performing Arts from Te Whare Wānanga o Awanuiārangi in Whakatāne. In 2018, Parekura graduated with a Bachelor of Arts Honours (Māori) from EIT.

Parekura, who is a second language learner, is fluent in te reo Māori and credits her upbringing, her students, her lecturers at EIT, Te Panekiretanga o Te Reo and Te Whare Wānanga o Awanuiārangi for influencing and inspiring her.

Driven to add to kaupapa Māori research and encouraged to create something for her hapū, Parekura was supported by her supervisors and lecturers to complete her Master's in te reo Māori.

"There's not a lot written in Māori. I wanted to create something for my children, my nieces and nephews, my grandchildren, so that when they decide to study toward a Master's, there's something there for them to look at."



Parekura Rohe-Belmont

Parekura plans to write her PhD in te reo Māori as well and says that while she loves the English language, she feels she can express herself better in te reo.

As a composer, it seemed only natural that her Master's thesis was based on her marae, Te Rauhina in Wairoa.

"I wanted to have a look at the songs composed for the opening of our meeting house. There were lots of songs composed around the late '70s, early '80s. I did a study on those songs, analysed the words within, identified the language features and then studied the composers of those songs."

Parekura, whose PhD will extend on her Master's thesis and focus on three marae, is in the process of writing the abstract and applying for ethics approval.

"My marae is at the end of the Wairoa River, but there's actually thirty more on our river. My PhD research is based on three marae up the river - Te Reinga; Rangiāhua and Whetū Mārama. Each marae has some traditional and some contemporary waiata, so I've chosen three marae that have special meaning."

"Te Reinga marae is where my husband and son come from. Rangiāhua marae is where I spent a lot of time training for kapa haka competitions. My connection to Whetū Mārama marae, in Frasertown, is through my church, te hāhi Rātana."

"I'd like to compose song to give back to those marae and their people."

Sustainable Futures

The sustainable values of design students who worked on a restoration project on EIT's campus changed significantly as the project went on, research has found.



Dr Mazin Bahho

Dr Mazin Bahho, Senior Design/Spatial Lecturer at EIT's Design School, wrote a paper on the study entitled 'How a building influenced the environmental values of those involved' for Urban planning, an international peer-reviewed open access journal based in the Netherlands.

Mazin's latest research is linked to a project he worked on for his PhD which involved him sustainably retrofitting an existing log cabin on EIT's Hawke's Bay Campus in Taradale.

The cabin is the centrepiece of the newly established Ōtātara Outdoor Learning Centre at the historic Ōtātara Pa on the campus. The centre is a community environmental project involving partnerships with the Air New Zealand Environment Trust and other local organisations including the Hawke's Bay Regional Council, the Department of Conservation and local hapū, Ngāti Pārau.

The site has strong historical, cultural and spiritual associations with the local Māori community and was chosen by Mazin to become an exemplar for sustainable building practices. Mazin, with the help of his Design students from IDEASchool, transformed the previously abandoned cabin into an eco-friendly, sustainable building with insulation, double-glazed windows, solar panels, water storage and a wastewater treatment system.

Mazin says he wanted to publish in Urban planning because it has a theme of zero energy renovation and how to get users involved.

"What they're saying is that most of the housing stock, not only in the Netherlands but all around the world, has already been built. So new builds are probably a small proportion of what is being used."

"It is about convincing people to buy into renovating this existing stock in a sustainable renovation. If you look at what was built in New Zealand in the 1940s to the 1960s, the idea of insulation and air tightness has not actually been entertained."

Mazin says his latest paper focussed on the attitudes of the Design students who had been involved in the retrofit of the cabin.

"My paper deals with the way I went about designing this small building on the hill, the measures that I went to in terms of getting it renovated, and how it has affected the environmental values of the designers."

"Renovation projects are, by nature, complex and multi-layered and often deal with a number of issues. These include an existing architectural pattern,

cultural and social values that were embedded in that kind of building, aspects of energy efficiency, and the important factor of finance. How much does it cost to do something that is environmentally sympathetic?"

The research also looks at why people chose to be involved in various stages of the renovation project and their attitudes towards sustainability.

"We looked at the six design students' sustainable values when they started, and then at the end of the project I interviewed them again to find out how engaging in this project affected them."

The results, says Mazin, were "quite noticeable" with students actively communicating what they had been involved in.

"For example, one student started a Facebook page where she published or posted a lot of articles about sustainability, while another student convinced her neighbour who was retiring to invest in solar panels as a renewable energy source."

Many of the students took ownership of the project and were inspired by it.

"They were driving the project and even after the project they were interested to know how it had evolved."

It did not stop there though as the students were keen to know as much about sustainable practices as possible.

"The students stressed the importance of using energy and other natural resources responsibly and were motivated to an extent to choose sustainable options. They displayed responsible views regarding heritage awareness, and this was also apparent in their concept design."

"They were keen to acquire in-depth knowledge about environmental matters, particularly focusing on the effects of non-environmentally harmful food growing and processing practices. Participants also saw the cultural, historic, and guardianship (kaitiaki) dimensions of the Ōtātara site as a significant element of influence on the project's renovation concept and an important reason for taking part in the project."

Mazin says that the attitudes of the students reflect a broader change in society when it comes to sustainability.

"A few years ago it was seen as a lifestyle choice where people ate organically and used materials sustainably in order to feel good."

"Now, many people, especially young people, feel a responsibility to behave sustainably or to adopt sustainable practices in terms of their food or their waste, or recycling, or materials. So many of them think twice using, for example, materials that have a high embedded energy-like metal."

For Mazin, the project reinforced the importance of any sustainability actions being visible so that they may inspire others to act.

Providing small computers and cheap internet access overcomes barriers to digital inclusion facing lower income groups in Hawke's Bay, a pilot study by EIT School of Computing researchers has found.

The research: A case study in digital inclusion and sustainability in regional New Zealand by Associate Professor Emre Erturk, and Ian Purdon, Lecturer and Programme Coordinator, is due to be published on the influential website, <https://ieeexplore.ieee.org/>. The research, which was done in 2021, was also the subject of an online presentation that Emre gave at the University of Cambridge's International Conference on Information Management, 2022. The research stems from a project on the digital divide that was funded by InternetNZ.

Emre says that digital inclusion involves ensuring everyone can access computer technologies to participate in the constantly growing online information society.

"Globally and in New Zealand, smaller and provincial communities also exhibit a particular risk of digital exclusion relative to larger and more populated centres. If we better understand the challenges affecting local people, then we can better understand their current and future participation in the digital economy. One of the challenges to digital inclusion for lower income groups is cost."

The trial involved rolling out Raspberry Pi 400 computers for home use, coupled with an inexpensive community internet scheme to access news, e-government and educational websites.

Emre says the devices came with keyboards and the displays are provided for free by local organisations and the e-recycling centre.

"The computers were donated and recycled through EIT, and they are quite inexpensive at just over \$100. We also arranged cheap internet connections as well. We also gave them an HDMI cable so that they could connect the computer to their home TV."

"So, basically if someone did not have a modern computer at home, they can take this and connect it to other devices."

The other aspects of the study, besides overcoming cost barriers, are social sustainability and digital sustainability, says Emre.

"For us, the study was not about giving people a device for free, but education as well." "They're actually getting some instructions and a chance to interact with people in the project at EIT. Once they don't need it anymore, the device goes back to EIT and is used for other groups. This is where the sustainability aspect comes in."

Participants in the research were given instructions on how to improve their skill, as well as which government, business and news websites they should visit. Their reflections and feedback on the exercise were then recorded.

“Through this process, we were able to get feedback in terms of whether or not they found it as a potential solution - a cost effective solution.”

“And it helps them from not just the cost effectiveness perspective, but the pilot study also helps them in terms of education and giving them instructions and support in what to do with the device. As it was, there were people who came forward who were both needy and interested in project.”

Ten Raspberry Pi single board computers were given to participants in the study. The participants were all linked to EIT

“They were either adult students or lived with their parents. Part of the study was looking at getting the primary person to share the device with others in the house like flatmates and parents.”

Emre says the study concluded that most individuals experiencing digital inclusion will incrementally add and learn new applications and customisations while digitally excluded citizens may even disuse what they have used in the past.

“The pandemic makes it more urgent to gather more data on this phenomenon and continue the public and academic discussion. This requires regular adoption of and innovation with technology.”

“The technology and social scene that we develop today will mean much to the future generations. Therefore, it is important to continue projects that aim to improve the quality of digital life for more people across the communities and cities. This will lead to better cohesion and social sustainability as people will be able to communicate more easily and share experiences with others, instead of facing the risk of becoming more isolated individuals.”

An EIT researcher has been involved in long running research into the health and wellbeing of man (and woman's) best friend - our dogs.

The backdrop for the research and key finding is that approximately a third of all Aotearoa New Zealand households include a dog, with 28% of these dogs being overweight or obese, conditions that are associated with many serious health issues.

EIT Associate Professor Dr Rachel Forrest, an avid dog lover, says the latest research conducted in 2021, is Meke People, Meke Dogs, Meke Meter evaluation of human and canine wellness. The original Meke Meter for people is an indigenous self-reported wellbeing tool that was developed by EIT postgraduate students Levi and Dana Armstrong, along with Rachel and other EIT staff.

Rachel and Fiona Esam (formerly of Companion Animals New Zealand, CANZ) led the latest research.

“The aim of this study is to pilot the dog Meke Meter as a tool for evaluating canine wellness, and to explore the association between human and canine wellbeing.”

Rachel says the research has yielded a significant amount of data which is still being analysed.

Rachel’s original research into pet wellbeing began with the Patu Pets project in 2017. During this project pet checks were embedded into an existing healthy lifestyle intervention (Patu™) run for Māori by Māori and based on group exercise, to increase awareness about pet welfare. The Dog Meke Meter was developed during this project.

Rachel says “The Patu Pets initiative was reciprocal in nature, allowing pet care experts to engage with and educate people about their pets while the Patu community provided EIT Veterinary Nursing Students a valuable opportunity to practice their skills and connect with the local community.”

The Patu pets project was extended into the 2019 Furry Whānau project with the help of funding from the New Zealand Companion Animal Trust. This larger national project explored people’s attitudes towards companion animals and pet owners’ attitudes to their animal’s health and wellbeing along with what factors influence these attitudes. Data was collected from a survey of NZ residents over 18 conducted online between January and March 2019.

Due to Covid-19, many of the findings have only been published recently. One of the research papers: Potential owner-related risk factors that may contribute to obesity in companion dogs in Aotearoa New Zealand was submitted to the influential MDPI journal Animals in 2021 and was published in 2022.

The paper was authored by Rachel, Fiona, Dr Leena Awawdeh, Maria Pearson, and EIT’s Executive Dean and Professor of One Welfare, Nat Waran.

The study aimed to identify potential owner-related risk factors contributing to canine obesity in NZ. The reason for identifying these potential risk factors was to inform intervention to maintain a healthy weight in companion dogs and ensure NZ dogs live a good life.

Nearly a two thirds (63.5%, n = 1494) of the survey participants (n = 2358) owned at least one dog and these respondents were asked about their dog’s body condition and about their diet.

Rachel says the study highlighted several potential owner-related risk factors contributing to obesity in companion dogs in Aotearoa NZ.



Maria Pearson

“We have identified that owners are often unfamiliar or disagree with the ideal body condition for dogs. They also provided their dogs with a varied diet, including various forms of treats, making it challenging to track caloric intake.”

“We also found that social factors such as ethnicity, income, and the number of children impacted the type of food given to dogs, with more obesogenic food options provided by respondents who were Māori, had a lower income, and/or had children.”

Rachel says the speculation is that accessibility, time, and financial constraints drive these dog food selections and suggests that supermarket- and web-based healthy weight interventions which are delivered from an animal welfare and/or breed society perspective (as opposed to having commercial links) are important due to their convenience and perceived trustworthiness.

“We also suggest that better food quality standards and easy-to-understand labelling will facilitate the maintenance of a healthy weight in dogs.”

Rachel says there are still many findings to come from the 2019 Furry Whānau research. The final report can be found on the CANZ website.

“We want to write about people’s attitudes to roaming animals, to having pets put down and to putting down strays and ferals. The survey covered so many things, including how people travel with pets in their cars and the health and safety issues around that. We found that many people simply let their dogs roam in their cars while they are driving.”

The intersection of sustainability and study abroad is the subject of a new book co-edited by an EIT School of Business researcher.

The book, *Sustainability and Education Abroad*, is due out later in 2022 and Dr Pii-Tuulia Nikula, Principal Academic Staff Member in EIT’s School of Business, co-edited it in 2021 with Dr Karen McBride, President and Founder of Bound International. The book is set to be published by the Forum on Education Abroad by the end of 2022.

“The Forum is based in the United States, so we do have quite a few case studies from there. We also have a New Zealand case study and some from other countries.

“We look at the programmes being run in Europe, Africa and Asia and the sustainability issues and challenges that relate to them as well,” says Pii-Tuulia, who is a co-founder of Climate Action Network for International Educators (www.canie.org).

“We believe the book will become an important resource for international education practitioners, researchers and policymakers and will help the field

to transform the way in which we design and conduct our education abroad activities across the globe.”

She says the aim of the book is to improve the understanding of sustainability issues by key education abroad stakeholders and show them the available solutions.

“This is the first book, to our knowledge, that focuses on this topic. We look at how we can measure what that footprint is and what the benefits of it are. How do we value those different issues to decide what the best way forward is?” Pii-Tuulia says it is an emerging theme.

“For now, we think that sharing these case studies and showing how people have introduced programmes and changed practices is just so important for others to learn from.”

Contributors to the book represent the field of international higher education and/or sustainability in higher education.

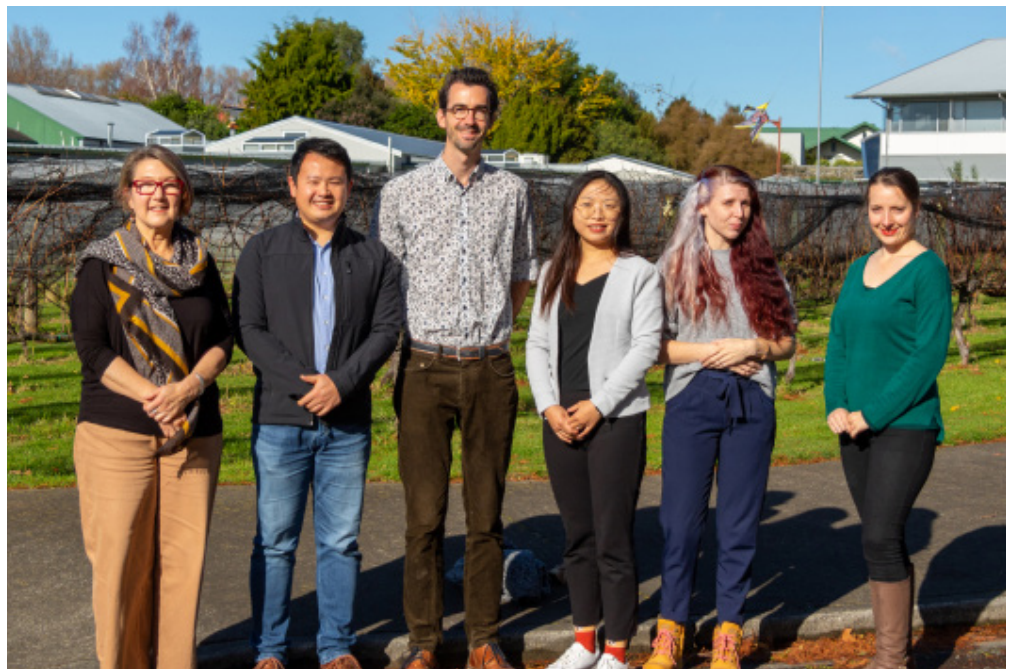
Pii-Tuulia says she got involved in the project because she felt it was an important issue to be addressed by the sector.

Vignette

Rise of EIT's next generation of wine and viticulture researchers

A diverse group of EIT academics and researchers is bringing new energy to the School of Viticulture and Wine Science and leading the way with research that is benefitting Hawke's Bay and New Zealand.

Sue Blackmore, Dr Victor Ye,
Dr Rory Hill, Jane Qin,
Briar Davies and
Dr Chandré Honeth



Held at EIT's Hawke's Bay Campus, the symposium, called Advancing Viticulture and Wine Related Research, featured researchers from EIT, the University of Auckland, Nelson - Marlborough Institute of Technology (NMIT), Lincoln University, and the Bragato Research Institute (BRI), LandWISE and Ag Research. EIT researchers who made presentations were the Coordinator of EIT's Postgraduate Programmes, Dr Rory Hill; Viticulture and Wine Science Lecturer Dr Victor Ye; Viticulture and Wine Science Lecturer; Dr Chandré Honeth; and Wine Science Lecturer Jane Qin.

A second symposium is scheduled for September 1, 2022.

At the heart of the work being done in the School is the development of postgraduate programmes at EIT. Responsible for the suite of programmes is Rory. He says the suite of offerings - the Master of Wine Business and Innovation, the Postgraduate Diploma in Wine Business and Innovation and the Postgraduate Certificate in Wine Business and Innovation - was a response to calls from within the New Zealand wine industry for graduates who could demonstrate critical understanding of diverse industry issues through a commercial lens.

"The kind of courses we're doing on our wine business programmes at EIT include global wine marketing, sustainability in the wine industry, entrepreneurship in wine business, technology and innovation in the wine industry."

"Part of the value of the programmes is that our students can also take courses like financial management, leadership, and digital marketing, through the School of Business."

Rory says he is enjoying offering the new programmes, and the research he is able to do. He says having a close-knit group of colleagues is important.

"We have a School research committee, which meets every month and where we can discuss the research we're doing, talk about planned research, and support and encourage each other. I think that's a key part of the academic endeavour."

"If you're doing research and scholarly work, you need to have peers and colleagues who you can bounce ideas off and informally review each other's work and encourage each other."

He says EIT has been very supportive of his research.

"I have dedicated research hours. The depth and breadth of my peers' research capabilities are remarkable and a real strength for EIT. The support offered with PBRF preparation, and the availability of internal research funding are also invaluable for early career researchers."

Rory, who has a Doctor of Philosophy (DPhil) from Oxford University, says he has a background in cultural geography.

“My research concerns the cultural and commercial context of wine. Having moved to New Zealand from Europe in 2019, I have learnt a great deal about wine in the New World and see many fascinating differences and similarities with the Old World.”

Rory says he started work on three overlapping research projects when he worked at Lincoln University in 2019, and these are now all being concluded and submitted as publications.

“The projects concerned: the challenges to getting local wines on local menus in

Christchurch and Queenstown; how wine producers in North Canterbury (New Zealand’s newest GI wine region) are building and communicating a sense of place; and how events and festivals bring benefits to wine producers beyond revenue. Along with my Lincoln colleague, Dr Joanna Fountain, I am looking forward to sharing the findings from these projects with New Zealand’s wine and tourism industries.”

Rory says research is crucial to him.

“It allows me to discover things, to meet people, to engage in debate, to publish, and to have a deep spring of data, insights and anecdotes to draw from in teaching.”

Bringing his voice and expertise to the wine research team is Victor, who has a PhD in Wine Science from Lincoln University. Victor specialises in wine chemistry, sensorial evaluation, wine wastes, bioactivity (antioxidant and antiviral activity).

The research he has been conducting has resulted in a manuscript on the polarised partial napping of Hawke’s Bay Chardonnay wine. This involves him collaborating with Dr Daniel Dang from EIT’s School of Computing to develop an App for wine sensory evaluation.

“This App will improve efficiency and accuracy of the data collection in sensory evaluation. We validated the App in a student project, and it shows that the App is successful. Now we are adding more functions and methods to this App.”

“The great thing about this App is that it is not just limited to wine study but can be also used in food study.”

Another student project Victor has been involved in is a cheaper method for monitoring mannoprotein in winemaking.

“Potentially, this method can be done in a winery lab, and can be used to monitor the process of on lees ageing.”

Victor says that throughout this process EIT has been very supportive, especially in providing funding and giving advice.



Dr Daniel Dang

Another active researcher is Chandré, who hails from South Africa, where she obtained her PhD in Viticulture from the prestigious Stellenbosch University in 2018.

Chandré, teaches a number of the viticultural courses relating to vine physiology, viticultural practice, soil management and sustainability. She is also responsible for running the degree research paper and works closely with other staff members and industry to ensure that students are conducting relevant and practical research.

“My aim at EIT is to equip students with the knowledge and skills they need to establish themselves as critical thinkers, experimentalists and innovators in industry.”

She also conducts her own research, which is predicated on industry feedback and current issues in the field.

“My background and research has focused on viticulture, specifically looking at responses induced by external factors and management practices on grapevine physiology with a specific emphasis on berry metabolism and quality parameters. For the last few years, I have been involved in two industry research projects with another one waiting in the wings.”

One of the projects involved assessing different viticultural treatments to improve Syrah ripening characteristics. This research has been conducted in collaboration with the Hawke’s Bay Vine Group (part of New Zealand Winegrowers), The Bragato Research Institute, Thoughtful Viticulture and a number of local Hawke’s Bay producers.

The second project was established as a subsidiary to an established long term trial investigating an environmentally friendly and sustainable way of managing mealy bug in the vineyard and thus reducing the incidence of leafroll virus. This research was conducted in collaboration with Plant and Food Research as well as Thoughtful Viticulture.

Chandré says EIT has been very supportive in helping staff attain their research goals.

“I personally have been afforded the opportunity to pursue my specific research interests in conjunction with industry and also present and interact with researchers from other facilities in New Zealand.

“This has helped to establish positive relationships with key members of the industry. From a more practical aspect, support has also been provided in the form of funding, access to facilities, high-quality equipment and indispensable laboratory staff.”

For Chandré, research is an essential part of being an academic.

“As an educator, it is necessary that the information relayed in classes is current and accurate. It is also important that students learn and appreciate

what goes into a robust research trial. This knowledge extends into their careers where they are able to conduct research and address issues pertinent to their specific situations, but which may also be helpful to other producers.”

“As a researcher, I feel that it is my responsibility to help the industry answer questions and solve problems. I believe that research is at the core of a competitive wine industry and New Zealand producers certainly do not shy away from experimenting and getting involved with research initiatives.”

Also passionate about her craft is Jane, who graduated as a Master of Horticultural Science (in Viticulture and Oenology) from Lincoln University in 2016. Jane specialises in wine chemistry, sensory science and grapevine physiology. Her research, in collaboration with Victor, has centred around Chardonnay wines. “We were investigating chemical compounds and their contribution to mouthfeel of Chardonnay wines, and how winemaking techniques could alter the mouthfeel perception of Chardonnay wines.”

Jane says research is important for her to “stay tuned”.

“The current research that I am conducting is especially relevant with the subjects I am teaching, e.g., Sensory Science, Chemistry in Wine Science, and Fundamentals of Wine. Research allows me to update my knowledge and course materials, and while teaching those courses, it sparkles my interests in doing more research.”

Jane says she is appreciative of the support EIT provides researchers.

“We have a regular research meeting at our school, where all researchers and technicians present ideas and suggestions. Collaboration is always encouraged.

“Our head of school, Sue Blackmore is especially supportive and the symposium she organised allowed us to showcase our research and to pair up with others in the same research field.”

Student projects



Dana Armstrong

Dana Armstrong

EIT graduate Dana Armstrong completed a thesis in 2021 (with Distinction) for her Master of Health Science degree entitled *Using the Meke Meter to understand rangatahi hauora in the Aotearoa New Zealand Secondary School Context*.

Dana worked across two secondary education settings - one mainstream and the other alternative - to see the effect of the Meke Meter in both environments.

She talked to both students and the teachers about whether they found it useful or not useful and if there was a need for an adolescent specific Meke Meter. The study has found that there is scope for an adolescent-specific wellbeing tool to be co-designed with rangatahi for them to use to evaluate aspects that contribute to their wellbeing, set goals and track progress, with a focus on thriving and flourishing.

"Teachers play a vital role in equipping rangatahi to better understand their wellbeing so that they can make informed decisions that enhance their waiora and mauri ora especially once they are beyond the 'safety net' of the school environment. The Meke Meter is a powerful and versatile tool that can facilitate this," says Dana.

Dana's thesis concluded by stating that the importance of self-reflection to te ao Māori is captured in the following whakataukī: Titiro Whakamuri, Kōkiri Whakamua - Look back and reflect so you can move forward.

Duncan Barr

Examining the issue of digital inclusion was the subject of Duncan Barr's Master of Information Technology (MIT) postgraduate degree at EIT last year.



Duncan Barr

The title of Duncan's thesis was The digital divide is alienating communities. Duncan, 60, is Manager of Information Services at the Napier City Council. Having worked at Napier City Council for nearly seven years, and being involved in IT for 30 years, Duncan says he could see the many benefits of technology. He says the findings will help the Council co-design digital solutions with our community members.

"This research allowed me to explore those that struggle in being on-line and digitally connected in our local community.

"This research identifies characteristics and creates a framework to research the digital divide."

"From a local perspective, there needs to be a coordinated approach for a regional digital strategy between the Hawke's Bay councils, to bring together community groups and local businesses, so the aspects of suitable devices, affordable internet access, and digital learning programs can be addressed."

Duncan says that in completing the MIT programme, he also studied Cyber Security, e-Commerce and e-Marketing, Data Analytics and Dashboard Reporting, Vendor Management, IT Service Delivery, and Chatbots in Customer Services Centres.

"This attests the breadth of the programme offered by EIT and the quality of the lecturers," says Duncan.

Joanne Magill

Joanne Magill has a passion for information technology reaching those who are historically not early adopters.

The 49-year-old has completed her Master of Information Technology (MIT) postgraduate degree from EIT's School of Computing.

Her research thesis was Examining the use of virtual reality technology in palliative care in Hawke's Bay: The Introduction of a VR (Virtual Reality) Headset.

The research found that "upskilling support staff and making them comfortable first really helps and just providing the devices is not enough, they need to be supported".

Initially Joanne studied for a postgraduate diploma but was encouraged by her lecturers to aim for a Master's.

"The support I received at EIT was fantastic, early in my postgraduate study they encouraged me to stick with it as it was looking like an incredibly long process as I took my first level 8 paper in 2016."

"I particularly found the staff supportive when I found methods of study and systems new and different. They kept me up to date and informed all through all my study."

Joanne, who works for the Hawke's Bay District Health Board as part of Digital Enablement, says she believes in using technology as "a tool rather than a magic bullet".

"I would love to study more, possibly around educating others since I had such a positive experience returning to study after over 20 years."

"Working with technology, the elderly and other historically disadvantaged technology users would be my dream."

2021 Research Outputs

Book

Morris Matthews, K. (2021). *Lifting horizons: Anna Elizabeth Jerome Spencer—A biography*. MTG Hawke's Bay & Eastern Institute of Technology.

Edited book

Erturk, E. (Ed.). (2021). *Proceedings of the 12th Annual Conference of Computing and Information Technology Education and Research in New Zealand incorporating the 34th Annual Conference of the National Advisory Committee on Computing Qualifications*, Wellington, New Zealand 14th - 16th July 2021. CITRENZ. <https://www.citrenz.ac.nz/2021-proceedings/>

Lopez, D. (Ed.). (2021). *Mentoring practices and initiatives across Te Pūkenga*. Eastern Institute of Technology.

Marshall, M. (Ed.). (2021). *Gaston amoureux: For solo guitar by Michael Calvert* [Music score]. Hatchet Music.

Marshall, M. (Ed.). (2021). *Lascivious pleasing: For solo guitar by Michael Calvert* [Music score]. Hatchet Music.

Marshall, M., & Filmer, A. (Eds.). (2021). *Three pieces: For viola or violin & guitar by Anthony Ritchie* [Music score]. Hatchet Music.

Book Chapter

Baker, O., & Lopez, D. (2021). Implementation of the peer mentoring programme for postgraduate international students at the Southern Institute of Technology. In D. Lopez (Ed.), *Mentoring practices and initiatives across Te Pūkenga* (pp. 7-12). Eastern Institute of Technology.

Erturk, E., Lopez, D., & Yu, W. (2021). Acceptance of blockchain in smart city governance from the user perspective. In M. Lahby, U. Kose, & A. K. Bhoi (Eds.), *Explainable artificial intelligence for smart cities* (pp. 277-296). CRC Press.

John, S. P., & Walford, R. (2021). Social media in FMCG marketing: Understanding how supermarkets use Facebook during the COVID-19 pandemic. In F. J. Martínez-López & D. López López (Eds.), *Advances in digital marketing and eCommerce: Second International Conference 2021* (pp. 184-191). Springer International. https://doi.org/10.1007/978-3-030-76520-0_19

Lopez, D., Ikarath, S., Ekundayo, S., Freeman, C., & Sibley, J. (2021). Development of the peer mentoring programme for the international students at EIT's Auckland campus. In D. Lopez (Ed.), *Mentoring practices and initiatives across Te Pūkenga* (pp. 35-40). Eastern Institute of Technology.

Maurice Alford, L., McFadyen, E., & Nozue, A. (2021). Collaborating in writing: Crossing the threshold. In G. T. Stewart, N. Devine, & L. Benade (Eds.), *Writing for publication: Liminal reflections for academics* (pp. 97-109). Springer. https://doi.org/10.1007/978-981-33-4439-6_8

- Nelson, E., & Johnson, L. (2021). Addressing the socio-spatial challenges of innovative learning environments for practicum: Harmonics for transitional times. In W. Imms & T. Kvan (Eds.), *Teacher transition into innovative learning environments: A global perspective* (pp. 291-303). Springer Singapore. https://doi.org/10.1007/978-981-15-7497-9_23
- Nelson, E., & Johnson, L. (2021). 'Jump in off the deep end': Learning to teach in innovative learning environments on practicum. In N. Wright & E. Khoo (Eds.), *Pedagogy and partnerships in innovative learning environments: Case studies from New Zealand contexts* (pp. 225-242). Springer. https://doi.org/10.1007/978-981-16-5711-5_12
- Nelson, E., & Rehu, M. (2021). Culturally located learning: The potential of ILEs for Māori student success. In N. Wright & E. Khoo (Eds.), *Pedagogy and partnerships in innovative learning environments: Case studies from New Zealand contexts* (pp. 291-309). Springer. https://doi.org/10.1007/978-981-16-5711-5_15

Journal Article

Refereed

- Abel, S. L., Whitehead, L. C., Tipene-Leach, D. C., & Coppell, K. J. (2021). Proximal and distal influences on dietary change among a diverse group with prediabetes participating in a pragmatic, primary care nurse-led intervention: A qualitative study. *Public Health Nutrition*, 24(18), 6015-6026. <https://doi.org/10.1017/S1368980021001968>
- Bacon, H., Vigors, B., Shaw, D. J., Waran, N., Dwyer, C. M., & Bell, C. (2021). Is animal welfare an internationally understood concept in the zoo world? Thematic analysis of two regional groups of zoo staff. *Animals*, 11(7), Article 2059. <https://doi.org/https://doi.org/10.3390/ani11072059>
- Bacon, H., Vigors, B., Shaw, D. J., Waran, N., Dwyer, C. M., & Bell, C. (2021). Zookeepers – The most important animal in the zoo? *Journal of Applied Animal Welfare Science*. Advance online publication. <https://doi.org/10.1080/10888705.2021.2012784>
- Burrows, L. E. R., Zhou, H., Frampton, C. M. A., Forrest, R. H. J., & Hickford, J. G. H. (2021). Ovine FABP4 variation and its association with flystrike susceptibility. *Frontiers in Genetics*, 12(1019), Article 675305. <https://doi.org/10.3389/fgene.2021.675305>
- Byrne, A. L., Baldwin, A., Harvey, C., Brown, J., Willis, E., Hegney, D., Ferguson, B., Judd, J., Kynaston, D., Forrest, R., Heritage, B., Heard, D., McLellan, S., Thompson, S., & Palmer, J. (2021). Understanding the impact and causes of 'failure to attend' on continuity of care for patients with chronic conditions. *PLoS ONE*, 16(3), Article e0247914. <https://doi.org/10.1371/journal.pone.0247914>

- Chen, J. H. C., Brown, M. A., Jose, M., Brennan, F., Johnson, D. W., Roberts, M. A., Wong, G., Cheikh Hassan, H., Kennard, A., Walker, R., Davies, C. E., Boudville, N., Borlace, M., Hawley, C., & Lim, W. H. (2021). Temporal changes and risk factors for death from early withdrawal within 12 months of dialysis initiation—A cohort study. *Nephrology Dialysis Transplantation*. Advance online publication. <https://doi.org/10.1093/ndt/gfab207>
- Chisnell, C., Pentecost, M., & Hanna, S. (2021). An invisible population: The experiences of young adult carers studying at the Eastern Institute of Technology. *Scope: Contemporary Research Topics (Learning and Teaching)*, 10, 114-122. <https://doi.org/10.34074/scop.4010017>
- Coppell, K. J., Abel, S., Whitehead, L. C., Tangiora, A., Spedding, T., & Tipene-Leach, D. (2021). A diagnosis of prediabetes when combined with lifestyle advice and support is considered helpful rather than a negative label by a demographically diverse group: A qualitative study. *Primary Care Diabetes*. Advance online publication. <https://doi.org/https://doi.org/10.1016/j.pcd.2021.10.003>
- Engelbrecht, R., Walker, R., & Monson, K. (2021). Understanding experiences of diabetes care among patients with diabetic kidney disease: A qualitative interview study. *Renal Society of Australasia Journal*, 17(1), 10-16. <https://doi.org/10.33235/rsaj.17.1.10-16>
- Esam, F., Forrest, R., & Waran, N. (2021). Locking down the impact of New Zealand's COVID-19 alert level changes on pets. *Animals*, 11(3), Article 758. <https://doi.org/10.3390/ani11030758>
- Fatima, S. N., Akhtar, S., Shahid, S. M., Sajjad, A., & Bibi, A. (2021). Effect of salicylic acid supplementation on blood glucose, lipid profile and electrolyte homeostasis in gentamicin sulphate induced nephrotoxicity. *Pakistan Journal of Pharmaceutical Sciences*, 34(3), 1075-1079. <https://doi.org/10.36721/PJPS.2021.34.3.SUP.1075-1079.1>
- Forrest, R., Awawdeh, L., Esam, F., Pearson, M., & Waran, N. (2021). The diets of companion cats in Aotearoa New Zealand: Identification of obesity risk factors. *Animals*, 11(10), Article 2881. <https://doi.org/10.3390/ani11102881>
- Harvey, C., Byrne, A. L., Willis, E., Brown, J., Baldwin, A., Hegney, A. D., Palmer, J., Heard, D., Brain, D., Heritage, B., Ferguson, B., Judd, J., McLellan, S., Forrest, R., & Thompson, S. (2021). Examining the hurdles in defining the practice of Nurse Navigators. *Nursing Outlook*, 69(4), 686-695. <https://doi.org/10.1016/j.outlook.2021.01.011>
- Harvey, C., Otis, E., Osseiran-Moisson, R., Forrest, R. H.-J., Heritage, B. J., & Knight, B. A. (2021). Promoting mental health in New Zealand: Building resilience in teenage children. *New Zealand Journal of Educational Studies*. Advance online publication. <https://doi.org/10.1007/s40841-021-00232-1>
- Hill, R. (2021). Antipode viticole? Commerce global et terroirs d'invention en Nouvelle-Zélande. *Revue de Géographie Historique*, 19-20. <https://doi.org/10.4000/geohist.2337>
- Hill, R. A. D. 'Le terroir, c'est la vie': Re-animating a concept among Burgundy's wine producers. *Environment and Planning E: Nature and Space*. Advance online publication. <https://doi.org/10.1177/2514848621989610>

- Huang, G., & Erturk, E. (2021-2022). Application of the global computing curriculum guidelines and skills frameworks for competency discovery and analysis: A case study of data analytics. *Journal of Applied Computing and Information Technology*, 25(1). https://www.citrenz.ac.nz/jacit/JACIT2501/2021_Data_Curriculum_Paper%20Online.pdf
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- Kulshreshta, V., & Shahid, S. M. (2021). Epidemiology and prevalence of type 2 diabetes mellitus in children with obesity. *European Journal of Medical and Health Sciences*, 3(1), 39-43. <https://doi.org/10.24018/ejmed.2021.3.1.693>
- Mactaggart, G., Waran, N., & Phillips, C. J. C. (2021). Identification of thoroughbred racehorse welfare issues by industry stakeholders. *Animals*, 11(5), Article 1358. <https://doi.org/10.3390/ani11051358>
- McFadyen, E., & Benade, L. (2021). The importance of people and place: Reimagining school curriculum in Aotearoa New Zealand. *Teachers' Work*, 18(1), 12-17. <https://doi.org/10.24135/teacherswork.v18i1.323>
- McKelvie-Sebileau, P., Rees, D., Swinburn, B., Gerritsen, S., D'Souza, E., & Tipene-Leach, D. (2021). Combining cognitive mapping and indigenous knowledge to improve food environments in regional New Zealand. *Health Promotion Journal of Australia*. Advance online publication. <https://doi.org/10.1002/hpja.549>
- Nelson, E. (2021). Student voice in pedagogical decision-making: Nexus of transformation and problematic alliance. *The Australian Educational Researcher*. <https://doi.org/10.1007/s13384-020-00419-3>
- Nelson, E., Davies, L., Johnson, L., Jones, K., & O'Connor, N. (2021). Adapting to the ILE Practicum: New grammar for changing times in initial teacher education. *New Zealand Journal of Educational Studies*, 56(1), 103-124. <https://doi.org/10.1007/s40841-021-00207-2>
- O'Conner, L., Braithwaite-Flores, A., Jagroop-Dearing, A., & Dearing, C. G. (2021). Bowel screening in New Zealand: Are men and Pacific peoples being left behind? *Kotuitui: New Zealand Journal of Social Sciences Online*. Advance online publication. <https://doi.org/10.1080/1177083X.2021.2007960>
- Pearson, G., Waran, N., Reardon, R. J. M., Keen, J., & Dwyer, C. (2021). A Delphi study to determine expert consensus on the behavioural indicators of stress in horses undergoing veterinary care. *Applied Animal Behaviour Science*, 237, Article 105291. <https://doi.org/10.1016/j.applanim.2021.105291>
- Perera, A. I., Thomas, M. G., Petrie, K. J., Frater, J., Dang, D., Schache, K. R., Akroyd, A. F., & Ritchie, S. R. (2021). Reducing expectations for antibiotics in patients with upper respiratory tract infections: A primary care randomized controlled trial. *Annals of Family Medicine*, 19(3), 232-239. <https://doi.org/10.1370/afm.2672>
- Pentecost, M., & Austin, K. (2021). "A really important role": Using a participant-voiced poem to explore students' expression of social work's professional identity. *Scope: Contemporary Research Topics (Work-based Learning)*, 2, 66-71. <https://doi.org/10.34074/scop.6002009>

- Rehman, M., Mahboob, T., & Shahid, S. M. (2021). Possible association of Vitamin D receptor, caudal-related homeobox 2 polymorphism with the risk of cancer. *International Journal of Health Sciences*, 15(2), 9-13. <https://ijhs.org.sa/index.php/journal/article/view/5652>
- Robinson, L. M., Waran, N. K., Handel, I., & Leach, M. C. (2021). Happiness, welfare, and personality in rhesus macaques (*Macaca mulatta*). *Applied Animal Behaviour Science*, 236, Article 105268. <https://doi.org/10.1016/j.applanim.2021.105268>
- Shastri, Y., Hoda, R., & Amor, R. (2021). The role of the project manager in agile software development projects. *Journal of Systems and Software*, 173, Article 110871. <https://doi.org/10.1016/j.jss.2020.110871>
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- Tipene-Leach, D., & McKelvie-Sebileau, P. (2021). The impact of the covid-19 level 4 lockdown on food security among whānau of decile 1 schools. *MAI Journal*, 10(1), 17-20. <https://doi.org/10.20507/MAIJournal.2021.10.1.3>
- Whaanga, R., & Merchant, R. (2021). The initial COVID-19 rāhui: Resilience among social work taura in Tairāwhiti and Hawke's Bay. *MAI Journal*, 10(1), 34-40. <https://doi.org/10.20507/MAIJournal.2021.10.1.4>
- Wilson, B., Jones, N., Wood, T., Jagroop-Dearing, A., Kubovy, J., & Baker, M. (2021). Clinical outcomes of campylobacteriosis: A case series analysis of hospitalisations associated with the Havelock North Campylobacter outbreak. *New Zealand Medical Journal*, 134(1547), 71-84.
- Wong, Y. H. S., Wong, G., Johnson, D. W., McDonald, S., Clayton, P., Boudville, N., Vieceili, A. K., Lok, C., Pilmore, H., Hawley, C., Roberts, M. A., Walker, R., Ooi, E., Polkinghorne, K. R., & Lim, W. H. (2021). Socio-economic disparity, access to care and patient-relevant outcomes after kidney allograft failure. *Transplant International*, 34(11), 2329-2340. <https://doi.org/10.1111/tri.14002>
- Young, W., Rayner, R., & Talpey, S. (2021). It's time to change direction on agility research: A call to action. *Sports Medicine—Open*, 7(1), Article 12. <https://doi.org/10.1186/s40798-021-00304-y>

Conference Contribution

Published conference proceedings - refereed

- Walford, R., John, S., & Narula, J. (2021). Covid-19 implications for marketing of higher education: An exploratory study. In L. Bove, S. Bell, & A. Hito (Eds.), *ANZMAC Conference 2021 proceedings* (pp. 489-495). <https://www.anzmac2021.com/>

Published conference proceedings - non-refereed

- Tandon, B., & Erturk, E. (2021). An IOT internship using MQTT and AWS [Poster paper]. In E. Erturk (Ed.), Proceedings of the 12th Annual Conference of Computing and Information Technology Education and Research in New Zealand incorporating the 34th Annual Conference of the National Advisory Committee on Computing Qualifications, Wellington, New Zealand 14th - 16th July 2021 (p. 126). <https://www.citrenz.ac.nz/2021-proceedings/>
- Thomas, L., & Lopez, D. (2021). Factors affecting e-learning acceptance [Poster paper]. In E. Erturk (Ed.), Proceedings of the 12th Annual Conference of Computing and Information Technology Education and Research in New Zealand incorporating the 34th Annual Conference of the National Advisory Committee on Computing Qualifications, Wellington, New Zealand 14th - 16th July 2021 (p. 125). <https://www.citrenz.ac.nz/2021-proceedings/>
- Wang, H., & Lopez, D. (2021). Research on the application and implementation method of augmented reality game-based learning with disabilities [Poster paper]. In E. Erturk (Ed.), Proceedings of the 12th Annual Conference of Computing and Information Technology Education and Research in New Zealand incorporating the 34th Annual Conference of the National Advisory Committee on Computing Qualifications, Wellington, New Zealand 14th - 16th July 2021 (p. 124). <https://www.citrenz.ac.nz/2021-proceedings/>

Conference oral presentation - refereed

- Abraham, A., & Roy, R. (2021, April 30-May 5). What the hack—'defect-free' method to make work instructions and robotic process automation readiness [Paper presentation]. POMS Annual Conference online, Florida, United States.
- Awawdeh, L. (2021, November 25-26). The development and evaluation of a one welfare educational suite for use in Hawke's Bay Early Learning Centres [Poster session]. National ITP Research Symposium 2021, Porirua, New Zealand.
- Clear, A. (2021, July 14-16). The landscape of computing: Benchmarking ITP computing degrees [Paper presentation]. 12th Annual Conference of Computing and Information Technology Research and Education New Zealand (CITRENZ), Wellington, New Zealand.
- Clear, A., & Clear, T. (2021, July 14-16). Global benchmarking and visualising of ITP degree programs [Workshop presentation]. 12th Annual Conference of Computing and Information Technology Research and Education New Zealand (CITRENZ), Wellington, New Zealand.
- Cowie, B., & Nelson, E. (2021, November 28-December 2). Engaging with the residues of time: Palimpsest as a metaphor [Paper presentation]. Australian Association for Research in Education (AARE) 2021 Conference (Online).
- Dang, D. (2021, October 27). Challenges in learning web development at the first year of Bachelor of Computing Systems [Paper presentation]. Professional Practice Symposium 2021 (Online).
- Erturk, E. (2021, March 9-11). A critical inquiry: Using TOE as a theoretical framework for digital inclusion beyond 2021 [Paper presentation]. International Conference on Leadership and Management, Hawaii, United States.

- Erturk, E. (2021, March 27-29). Digital citizenship and management of information in a 21st century Smart City [Paper presentation]. 7th International Conference on Information Management (ICIM 2021), London, England.
- Fagan, K. (2021, November 24-25). Social identity, belonging, wellbeing and tattoos [Conference session]. Sociological Association Aotearoa New Zealand (SAANZ) Conference, Lincoln Canterbury, New Zealand. <https://www.saanz.net/saanz-conference-2021/>
- Jagroop-Dearing, A. J., van Dulm, O., Freeman, C., & Shahid, S. (2021, November 25-26). Covid-19 impact: International postgraduate health science and postgraduate nursing student stressed, but resilient [Paper presentation]. National ITP Research Symposium 2021, Porirua, New Zealand.
- MacKenzie, L. (2021, November 25-26). Drivers of susceptibility to fraudulent behaviour with Hawke's Bay secondary schools: A model [Paper presentation]. National ITP Research Symposium 2021, Porirua, New Zealand.
- McKelvie-Sebileau, P., Baddock, S., Iosua, E., Smith, L., Wu, L., Anderson, P., Miller, S., Leonard, G., Haggerty, C., Maihāroa, K. T., Brownie, S., & Leach, D. (2021, November). A longitudinal study resilience and wellbeing of staff from five institutions across Te Pūkenga network during the Covid-19 lockdown and subsequent lifting of restrictions [Paper presentation]. National ITP Research Symposium 2021, Porirua, New Zealand.
- McKelvie-Sebileau, P., Gerritsen, S., Swinburn, B., Tipene-Leach, D., Rees, R., & D'Souza, E. (2021, September 10). He wairua tō te kai: Community views on regional food security and wellbeing in children [Paper presentation]. HealthEx 2021, Auckland, New Zealand.
- McKelvie-Sebileau, P., Swinburn, B., Gerritsen, S., D'Souza, E., & Tipene-Leach, D. (2021, December 2-3). He wairua tō te kai: Nutrition, food security and wellbeing in children in regional New Zealand [Paper presentation]. Nutrition Society of New Zealand Annual Conference, Wellington, New Zealand.
- Narula, J. (2021, November 25-26). The attraction & retention of skilled employees in the digital industries in Hawke's Bay [Paper presentation]. National ITP Research Symposium 2021, Porirua, New Zealand.
- Nelson, E., & Cowie, B. (2021, November 28-December 2). A diffractive analysis of visual data nuggets: Image, caption, talk [Paper presentation]. Australian Association for Research in Education (AARE) 2021 Conference (Online).
- Nikula, P.-T. (2021, September 8-10). Decarbonisation and climate activism by New Zealand firms. [Paper presentation]. International Social Innovation Research Conference, Milan, Italy.
- Nikula, P.-T. (2021, February 4-5). The government's toolkit for managing risks in agent-based international student recruitment [Paper presentation]. Australasian Public Policy Network Conference, Melbourne, Australia (Virtual stream).
- Nikula, P.-T. (2021, November 25-26). Voluntary carbon certification and New Zealand firms [Paper presentation]. National ITP Research Symposium 2021, Porirua, New Zealand.

- Nikula, P.-T., & Stokes, B. (2021, November 29-December 1). Country promotion by international student recruitment agents. [Paper presentation]. Australian and New Zealand Marketing Academy Conference (ANZMAC 2021), Melbourne, Australia.
- Otis, E. L. (2021, November 25-26). Thriving in the face of change, challenge and stress—Building resilience in teenage children [Paper presentation]. National ITP Research Symposium 2021, Porirua, New Zealand.
- Passey, E. (2021, November 25-26). For staff at the Eastern Institute of Technology, is Ōtātara a geography of significance or a placeless geography? [Paper presentation]. National ITP Research Symposium 2021, Porirua, New Zealand.
- Pearson, G., Chubbs, E., Dwyer, C. M., Waran, N., Keen, J. A., Wemelsfelder, F., & Reardon, R. J. M. (2021, October 20-22). Classical counter conditioning promotes a positive affective state during a nerve blocking procedure in a randomised, blinded clinical trial [Paper presentation]. 17th International Equitation Science Conference Online.
- Randle, H., Henshall, C., Hall, C., Pearson, G., Preshaw, L., & Waran, N. (2021, October 20-22). It's just an emotion: Exploring horse owner perceptions of equine emotions [Paper presentation]. 17th International Equitation Science Conference Online.
- Roy, R. (2021, August 31-September 2). Infographics related to Covid-19 cases and their economic impacts on businesses in New Zealand [Paper presentation]. British Academy of Management (BAM2021) Virtual Conference, Lancaster, England.
- Roy, R., & Abraham, A. (2021, April 30-May 5). Exploring operational sustainability and marketing strategy of a New Zealand based fruit exporting company [Paper presentation]. POMS Annual Conference online, Florida, United States.
- Roy, R., Ranatunga, D., & Noor, H. S. (2021, November 25-26). An exploratory data analysis approach to investigate the collateral impact of Covid-19 on the New Zealand trades [Paper presentation]. National ITP Research Symposium 2021, Porirua, New Zealand.
- Shahid, S. M., & Jacinto, S. G. (2021, April 1-4). Impact of cultural stress on international medical & health science students in Auckland, New Zealand [Paper presentation]. International Conference on Medical Education, Universitas Islam Indonesia.
- Sutherland, B. (2021, July 1). Moving image: Between film & paint, image & text [Paper presentation]. Creative Practice at/and the In-Betweens Research Symposium, Hamilton, New Zealand.
- Taylor, B., Alani, N., & Erturk, E. (2021, July 14-16). Investigating Social VR-based student presentations [Paper presentation]. 12th Annual Conference of Computing and Information Technology Research and Education New Zealand (CITREnz), Wellington, New Zealand.
- Taylor, L.-A., Wawatai, N., Foma, A., & Malaitai, V. (2021, November 25-26). PolyActive Pacific community-based initiative [Paper presentation]. National ITP Research Symposium 2021, Porirua, New Zealand.

- Taylor, L.-A., Wawatai, N., & Lander, P. (2021, November 25-26). Developing a project-based learning approach in a Bachelor of Sport and Exercise Science [Paper presentation]. National ITP Research Symposium 2021, Porirua, New Zealand.
- van Dulm, O., Skelton, D., & Dipper, M. (2021, November 25-26). Work integrated learning and ITP resilience in the context of RoVe [Paper presentation]. National ITP Research Symposium 2021, Porirua, New Zealand.
- Walker, R. (2021, February 28-March 2). A discrete choice study of patient preferences for dialysis modalities [Oral presentation]. ISPD EuroPD Joint Virtual Congress.
- Walker, R. C. (2021, August 19-22). Advancing indigenous kidney health [Paper presentation]. 19th Asian Pacific Congress of Nephrology (APCN), Thailand (Online).
- Waran, N., & Passey, E. (2021, November 25-26). Ko au te taiao, ko te taiao ko au: I am nature, nature is me [Paper presentation]. National ITP Research Symposium 2021, Porirua, New Zealand.
- Waran, N., & Randle, H. (2021, October 20-22). Harnessing the power of education for advancing equine welfare [Keynote presentation]. 17th International Equitation Science Conference Online. <https://vimeo.com/632836720/1c48403e2f>
- Wawatai, N., & Haerewa, R. (2021, November 25-26). Māra Kai Project [Paper presentation]. National ITP Research Symposium 2021, Porirua, New Zealand.

Conference oral presentation - non-refereed

- Addington, L., Nikula, P. T., & West, E. (2021, February 15-17). The art and science of working with education agents: Quality assurance and partnership strategies [Paper presentation]. Association of International Education Administrators (AIEA) Virtual Annual Conference.
- Awawdeh, L., Forrest, R., Alani, N., MacKenzie, H., & Waran, N. (2021, December 6-7). The development and evaluation of a One Welfare augmented reality game for use in Hawke's Bay early learning centres [Poster session]. 2021 Unitec/MIT Research Symposium (Online).
- Blumenthal, T. (2021, October 28). Data science can help our bees, beekeepers and community. New Zealand Sustainable Development Research Symposium (Online). <https://www.youtube.com/watch?v=TaS3TQD6k5k>
- Caves, M. (2021, October 16). Embracing indigenous worldviews in culinary food design to rethink food systems and workplace culture [Oral presentation]. World Food Design Day 21 Online Symposium. <https://www.youtube.com/watch?v=YpsbnYpAW6M&t=2763s>
- Clear, A. (2021, July 30-August 1). Contemporary education concepts: International computing benchmarking. In M. Zhang, J. Chen, & Y. Zhang (Chairs), SIGCSE China Symposium. ACM Turing Award Celebration Conference (ACM TURC 2021), Hefei, China.
- Dang, D. (2021, October 27). Teaching green software development in computing curricula: Why and how? [Snapshot talk]. Professional Practice Symposium (Online).

- Forrest, R., Awawdeh, L., Esam, F., Pearson, M., & Waran, N. (2021, December 6-7). The diets of companion cats in Aotearoa New Zealand: Identification of obesity risk factors [Paper presentation]. 2021 Unitec/MIT Research Symposium (Online).
- Hiha, A. A., Stewart, D., & Young, M. (2021, May 28). Kia Angitu: Taking knowledge of te ao Māori into teaching praxis [Paper presentation]. Te Manawa Reka Curiosity Symposium, Tauranga, New Zealand.
- Hill, R. (2021, October 28). Through a glass, darkly: What do we know about restaurant wine sales by the glass? [Paper presentation]. Advancing Viticulture and Wine Related Research Symposium, Hawke's Bay, New Zealand.
- Honeth, C. (2021, October 28). Deficit irrigation to modulate Syrah quality parameters [Paper presentation]. Advancing Viticulture and Wine Related Research Symposium, Hawke's Bay New Zealand.
- Jones, K. (2021, November 29). Growing great teachers together [Conference session]. Teaching Council Initial Teacher Education Partnership Symposium (Online).
- Jones, K., & Wilkie, H. (2021, July 22). Growing great teachers together [Conference session]. TEFANZ Forum 2021 (Online).
- Lamont, A., Nikula, P.-T., & Cargill, F. (2021, October 5-8). International education climate action showcase [Paper presentation]. Australian International Education Conference (AIEC) Online.
- Nikula, P.-T. (2021, October 28). Moving towards a zero-carbon future in New Zealand—Organisational solutions and challenges [Oral presentation]. New Zealand Sustainable Development Research Symposium (Online).
- Otis, E. L. (2021, May 10-12). Let's make me resilient: Crisis applications [Conference session]. 2nd Clariden Global ANZ Student and Teachers Mental Health Wellbeing & Suicide Prevention Forum (Online).
- Otis, E. L. (2021, September 27-October 1). Thriving in the face of change, challenge and stress—Building resilience in teenage children [Workshop session]. Mental Health Awareness Week 2021 Wellbeing Webinars (Online).
- Otis, E. L. (2021, December 6-7). What we've learned about building resilience in teens [Conference session]. Rangaha Horonuku Hou - New Research Landscapes, 2021 Unitec/MIT Research Symposium (Online).
- Pentecost, M. M. (2021, July 2). Taiwi caucus [Conference session]. NZAC PD Symposium, Wellington, New Zealand.
- Qin, J. (2021, October 28). Wine composition of Pinot Noir as affected by leaf area to crop load ratio [Paper presentation]. Advancing Viticulture and Wine Related Research Symposium, Hawke's Bay, New Zealand.
- Raychaudhur, U., Nikula, P.-T., McLaughlin, J., & Blair, S. (2021, February 15-17). The role and intersections of sustainability with international education [Paper presentation]. Association of International Education Administrators (AIEA) Virtual Annual Conference.

- Roy, R. (2021, November 30). A global perspective on disruptions in business & economy: Challenges & opportunities to a sustainable future [Paper presentation]. International E-Conference on Disruptions in Business & Economy: Challenges & Opportunities to a Sustainable Future, Bangaluru, India.
- Rudge, A. J. (2021, May 28). Te Hono ki Toi: Creating connections between researchers and learners, between research and teaching [Paper presentation]. Te Manawa Reka Curiosity Symposium, Tauranga, New Zealand.
- Stewart-MacKenzie, H. L. G. (2021, May 28). Love and curiosity: The foundation for learning [Paper presentation]. Te Manawa Reka Curiosity Symposium, Tauranga, New Zealand.
- Tipene-Leach, D. (2021, August 6-8). Cultural safety, cultural competence and health equity [Keynote presentation]. GP21, Annual Conference of RNZCGP, Wellington, New Zealand.
- Tipene-Leach, D. (2021, July 27). Cultural safety, inequity and modern medical practice [Invited speaker]. New Zealand Medico-Legal Congress, Wellington, New Zealand.
- Tipene-Leach, D. (2021, July 2-3). What to do about continuing disparities? Creating Solutions: Towards Better Health Equity For All, Virtual Conference of the Associated Salaried Medical Specialists.
- Tipene-Leach, D. (2021, November 11-13). SUDI prevention: A new direction for the tail of the epidemic [Invited plenary speaker]. ISA-ISPID 2021 Digital Conference.
- Yang, A., McCaffery, O., McAdam, S., Patel, R., Shadbolt, G., & Kneuer, B. (2021, May 28). Mātauranga Māori in international tertiary teaching [Paper presentation]. Te Manawa Reka Curiosity Symposium, Tauranga, New Zealand.
- Ye, V. (2021, October 28). Characterization of commercial examples of New Zealand Sauvignon Blanc [Paper presentation]. Advancing Viticulture and Wine Related Research Symposium, Hawke's Bay, New Zealand.

Report

- Carter, M., Potiki, M., Haggie, H., & Tipene-Leach, D. (2021). Cultural safety within vocational medical training. Report of Te ORA and the Council of Medical Colleges, May 2021. <https://www.cmc.org.nz/media/w0be4zv5/final-te-ora-cmc-cultural-safety-report-20210512.pdf>
- Hinge, S. G. (2021). Practical pedagogical tips for effective experiential learning in an online environment. EIT Tairāwhiti.
- Jones, K., & Lloyd, C. (2021). Hastings Kāhui Ako. Severe behaviour study: What is really happening in our schools? Report prepared for the Nga Hau e Wha, Hastings East and Whirinaki Kāhui Ako.

Jagroop-Dearing, A., Baker, M. G., & Jones, N. (2021). Havelock North *Campylobacter* outbreak programme: Research achievements. Report to the Health Research Council.

Tipene-Leach, D., Fidow, J. F., Aperahama, K., Hall, A., McIntosh, C., Mitchell, E., Muriwai, H., Nicoll, K., Spriggs, K., & Tetitaha, T. (2021). SUDI prevention in New Zealand: The case for Hauora – A wellbeing approach. Report of the Ministry of Health Expert Advisory Group on SUDI, August 2021.

Exhibition

Non-refereed

Baker, P. (2021). Intermission [Lightbox installation]. In e-Vent 1 [Group exhibition]. Vent Gallery, IDEASchool, Eastern Institute of Technology, February 15-March 15, 2021.

Baker, P. (2021). River crossing—Skipping stones [Raruraru, Oriori, Whakaripiripi kōhatu, Uta, Orokohanga, Tane-māhuta; light boxes, translucent vinyl; solo exhibition]. F. G. Smiths, Ahuriri, New Zealand, October 2021-January 2022.

Binding, W. (2021). 3 studies for the island [Painted artwork, acrylic, graphite, and colour pencil on MDF]. In Remembering Roy [Group exhibition]. Hastings Community Art Centre, Hastings, New Zealand, October 4-20, 2021.

Binding, W. (2021). Forest: A workbook [Painted, drawn & collaged artwork, acrylic, graphite and colour pencils, photocollage, paper and cardboard collage, in 230gsm spiral bound drawing book; Forest: MP4 [Video slide presentation]; solo exhibition]. Vent Gallery, IDEASchool, Eastern Institute of Technology, Hawke's Bay, New Zealand, March 30-April 17, 2021.

Binding, W. (2021). Studies for a theory of cloud [Painted artwork, acrylic, graphite pencil and pigment ink on canvas]. In Hawke's Bay Art Review [Group exhibition]. Creative Arts Napier, Napier, New Zealand, November 19-December 8.

Binding, W. (2021). Studies for the island (Night and day) [Painted artwork, acrylic, graphite, and colour pencil on canvas]. In Event 1 Staff Exhibition [Group exhibition]. Vent Gallery, IDEASchool, Eastern Institute of Technology, Hawke's Bay, New Zealand, February 15-March 15, 2021.

Bruce, L. (2021). Melee I [Clay, slips, oxides, glazes; group of seven]. In Hawke's Bay Art Review 2021 [Group exhibition]. Creative Arts Napier, Napier, New Zealand, November 19-December 8, 2021.

Cleave, S., Marsh, L., O'Connor, N., & Wallace, K. (2021). Intercourse [Intermittent performance]. In Noise Vacancy [Group exhibition]. Public Trust Building, Te Tairāwhiti Arts Festival, Gisborne, New Zealand, October 2021.

Cleave, S., Marsh, L., O'Connor, N., & Wallace, K. (2021). Name please [Interactive performance featuring Anna Harris]. In Noise Vacancy [Group exhibition]. Public Trust Building, Te Tairāwhiti Arts Festival, Gisborne, New Zealand, October 2021.

- Cleave, S., Marsh, L., O'Connor, N., & Wallace, K. (2021). Red [Interactive artwork & projection featuring Rowan Belcher]. In Noise Vacancy [Group exhibition]. Public Trust Building, Te Tairāwhiti Arts Festival, Gisborne, New Zealand, October 2021.
- Cleave, S., Marsh, L., O'Connor, N., & Wallace, K. (2021). Scale of trust [installation]. In Noise Vacancy [Group exhibition]. Public Trust Building, Te Tairāwhiti Arts Festival, Gisborne, New Zealand, October 2021.
- Cleave, S., Marsh, L., O'Connor, N., & Wallace, K. (2021). Waiting room [Performance featuring SLAMM]. In Noise Vacancy [Group exhibition]. Public Trust Building, Te Tairāwhiti Arts Festival, Gisborne, New Zealand, October 2021.
- Gibbs, S. (2021). Ka riporipo [Painting, acrylic on archival paper]. In Parekura: Honouring a leader through art [Group exhibition]. Te Papakura exhibition space, Parliament, Wellington, New Zealand, August 2-October 7, 2021.
- Gibbs, S. (2021). Manawa rāangi [Light sculpture installation]. In Te Ara i Whiti [Group exhibition]. Kelvin Park, Te Tairāwhiti Arts Festival, Gisborne, New Zealand, October 8-17, 2021.
- Gibbs, S. (2021). Ororangi [Multi-media relief sculpture]. In Kōaka o Whakaaro—Toihoukura School of Māori Visual Art & Design [Group exhibition]. Tairāwhiti Museum, Gisborne, New Zealand, December 11, 2021-February 13, 2022.
- Gibbs, S. (2021). Pitau a Manaia (Reclamation of sacred site, Kaiti Urupa) [60m digital mural]. Kaiti Urupa, Gisborne, New Zealand, May 19 2021.
- Gibbs, S. (2021). [Six pieces of Hoe Nukuroa paintings]. In Hoea! [Group exhibition]. Mangere Arts Centre, Auckland, New Zealand, July 17-August 28, 2021.
- Gibbs, S. (2021). Tohora kauri [Releaf sculpture]. In Mairanga [Group exhibition]. Toi Ake Gallery, Gisborne, New Zealand, April, 2021.
- Gibbs, S. (2021). Under the Tairāwhiti moon [Painting, acrylic on board]. Maia Gallery, Toihoukura, Eastern Institute of Technology, Gisborne, New Zealand.
- Koopu, E. (2021). He Kirimaaku [Solo exhibition]. Artspost, Waikato Museum, Hamilton, New Zealand, February 12-March 15, 2021.
- Koopu, E. (2021). Tairehua, tairehia. In Mairanga [Group exhibition]. Toi Ake Studio and Gallery, Gisborne, New Zealand, April 2021.
- Koopu, E. (2021). Te Ara Kowatawata. In Matariki Ramaroa, Lighting the Beacon Festival, Maclean Park, Paraparaumu, New Zealand, July 2-24, 2021.
- Koopu, E. (2021). Pari karangaranga [Solo exhibition; 10 neon lights]. Maia Gallery, Toihoukura, Gisborne, New Zealand, October 2021.
- Koopu, E. (2021). Pari karangaranga [10 neon lights]. In Te Ara i Whiti [Group exhibition]. Kelvin, Park, Te Tairāwhiti Arts Festival 2021, Gisborne, New Zealand, October 8-17, 2021.
- Lardelli, D. (2021). Manu kai Series 2 [Multi-medium]. In Mairanga [Group Exhibition]. Toi Ake Gallery, Gisborne, New Zealand, April, 2021.
- Lardelli, D. (2021). Parekura [Digital print]. In Parekura: Honouring a leader through art [Group exhibition]. Te Papakura exhibition space, Parliament, Wellington, New Zealand, August 2-October 7, 2021.

- Lardelli, D. (2021). Ta Derek Lardelli Tu Takawhi: 40 Year retrospective exhibition [Solo exhibition]. Toi Maori Gallery, Wellington, New Zealand, October 15-November 26, 2021.
- Lardelli, D. (2021). Ta Derek Lardelli: Tinana [Life drawings; solo exhibition]. Te Puwaha Gallery, Te Tairāwhiti Arts Festival, Gisborne, New Zealand, October 7-21, 2021.
- Lardelli, D. (2021). Te whatu o Te Rangi [Multi-medium]. In Matariki 2021—He toi whakaaro, he mana tangata [Group exhibition]. Waiheke Community Art Gallery/Te Whare Taonga o Waiheke, June 19-July 18, 2021 and E Tā [Group exhibition]. Maia Gallery, Toihoukura, Gisborne, New Zealand, May 21-June 25, 2021.
- Lewis, A. J. (2021). [Three paintings]. In Pūrūkau [Group exhibition]. Te Waharoa Art Gallery, Te Tairāwhiti Arts Festival, Gisborne, New Zealand, October 8-17, 2021.
- Lewis, A. J. (2021). [Two works from Kaitiaki series]. In Parekura: Honouring a leader through art [Group exhibition]. Te Papakura exhibition space, Parliament, Wellington, New Zealand, August 2-October 7, 2021.
- Lewis, A. J. (2021). Uri taniwha [Native wood and flax fibre relief artwork]; Ngangahu ahiahi [Bent mdf, pine, paint relief artwork]. In E Tā [Group exhibition]. Maia Gallery, Toihoukura, Gisborne, New Zealand, May 21-June 25, 2021.
- O'Connor, N. (2021). Eco echo eco echo [Soundscape]. In Colonies [Group exhibition]. Tairāwhiti Museum, Gisborne, New Zealand, August 7-October 3, 2021.
- O'Connor, N. (2021). Rogue wave [Soundscape]. In Colonies [Group exhibition]. Tairāwhiti Museum, Gisborne, New Zealand, August 7-October 3, 2021.
- O'Connor, N. (2021). Split the Inheritance [Sound installation]. In Noise Vacancy [Group exhibition]. Public Trust Building, Te Tairāwhiti Arts Festival, Gisborne, New Zealand, October 2021.
- O'Connor, N. (2021). Treble sea [Soundscape]. In Colonies [Group exhibition]. Tairāwhiti Museum, Gisborne, New Zealand, August 7-October 3, 2021.
- Roberts, N. V. (2021). Kamman Vortex Street one. In Tangaroa [Group exhibition]. Hastings Community Art Gallery, Hastings, New Zealand, March 2-13, 2021.
- Solomon, M. (2021). Pītaumucknaia [Relief artwork]. In Parekura: Honouring a leader through art [Group exhibition]. Te Papakura Exhibition Space, Parliament, Wellington, New Zealand, August 2-October 7, 2021.
- Solomon, M. (2021). Pītaumucknaia [Relief artwork]. In Kōaka o Whakaaro—Toihoukura School of Māori Visual Art & Design [Group exhibition]. Tairāwhiti Museum, Gisborne, New Zealand, December 11, 2021-February 13, 2022.
- Tuhua, N. (2021). Raupeka, a visual depiction of the coexistence of pōuritanga and māramatanga [Painting]. In Kōaka o Whakaaro—Toihoukura School of Māori Visual Art & Design [Group exhibition]. Tairāwhiti Museum, Gisborne, New Zealand, December 11, 2021-February 13, 2022.
- Tuhua, N., & Edmonds. (2021). Rāwhitiroa: Eternal enlightenment [Five infinity light boxes]. In Te Ara i Whiti [Group exhibition]. Kelvin Park, Te Tairāwhiti Arts Festival. Gisborne, New Zealand, October 8-17, 2021.

Webster, J. L. (2021). Interface 3 [Monoprint and intaglio print]. In e-Vent 1 [Group exhibition]. Vent Gallery, IDEASchool, Eastern Institute of Technology, February 15-March 15, 2021.

Wilkie, D. (2021). Hoya vessels [Clay, glazes; group of three]. In Hawke's Bay Art Review 2021 [Group exhibition]. Creative Arts Napier, Napier, New Zealand, November 19-December 8, 2021.

Curation

Gibbs, S. (Curator). (2021). Ko wai! [Group exhibition]. Hoea! Gallery, Gisborne, New Zealand, May 12-July 17, 2021.

Gibbs, S. (Curator). (2021). Te hoe nukuroa [Doctoral exhibition]. Maia Gallery, Toihoukura, Eastern Institute of Technology, Gisborne, New Zealand.

Gibbs, S. (Curator & exhibition designer). (2021). Kōaka o Whakaaro—Toihoukura School of Māori Visual Art & Design [Group exhibition]. Tairāwhiti Museum, Gisborne, New Zealand, December 11, 2021-February 13, 2022.

Koopu, E. (Curator). (2021). E Tā [Group exhibition]. Maia Gallery, Toihoukura, Gisborne, New Zealand, May 21-June 25, 2021.

Koopu, E. (Head curator). (2021). Parekura: Honouring a leader through art [Group exhibition]. Te Papakura Exhibition Space, Parliament, Wellington, New Zealand, August 2-October 7, 2021.

Lardelli, D. (2021). (Curator). Ruanuku, no te kaenga na te kaenga [Group exhibition]. Whitirēa Wharenuī, Whangara, Tairāwhiti, New Zealand, May 2021.

Marsh, L., O'Connor, N., & Wallace, K. (Curators). (2021). Noise Vacancy [Group exhibition]. Te Tairāwhiti Arts Festival, Gisborne, New Zealand, October 2021.

Morris Matthews, K., & Pope, G. (Curators). (2021). For home and country: Women's Institutes in Hawke's Bay. MTG Hawke's Bay, Napier, New Zealand, July 24-December 2021.

Design

Chiappin, A. J. (2021). New brand for Tararua District Council [Concept designs and implementation]. Tararua Council, Dannevirke, New Zealand.

Gibbs, S. (2021). Toihoukura Maramataka 2022 [Calendar]. Gisborne, New Zealand: Toihoukura, Eastern Institute of Technology.

Koopu, E. (2021). Tu Mai Tairāwhiti regional Covid-19 vaccination campaign [Design of all visual elements of the campaign, including an online, digital vaccination barometer]. Gisborne, New Zealand.

Lardelli, D. (2021 ongoing). Kiwa Pools [Graphic design of logo, naming of new complex, cultural elements for architectural design]. Gisborne District Council & Apollo Projects.

Tuhua, N. (2021). Te Ao Mārama [Stole design for the district court judges of New Zealand]. Chief District Court Judges Office, Gisborne, New Zealand.

Composition

- Lardelli, D. (2021). Poutangata [Haka]. Composed for the New Zealand Olympic Committee and performed for the first time at Tokyo Olympics by New Zealand athletes and NZOC staff, July-August 2021.
- Pierard, T. (2021). Walk of Wonders (Hawke's Bay Light and Fire Festival) [Score and sound design]. Bandolier.
- Pierard, T., & Frear, M. (2021). Waiata o Hōhepa [Composition]. Bandolier.
- Pierard, T., Grigorov, M., & Schwalbe, S. (2021). OST [Music; original soundtrack]. In Adam Ethan Crowe (Director), Lair [Feature film]. Ditto Productions.
- Rohe-Belmont, P. (2021). Tānemitirangi [Composition]. Mātangirau. Performed in the Titonga Waiata Hou - Poi section by Te Kura Kaupapa Māori o Ngāti Kahungunu o Te Wairoa at Te Haaro o Te Kaahu Secondary School Kapa Haka competition, Napier, New Zealand, May 14, 2021
- Rohe-Belmont, P. (2021). Te reo irirangi o Kahungunu [Composition]. Mātangirau. Performed by Te Kura Kaupapa Māori o Ngāti Kahungunu o Te Wairoa at Te Haaro o te Kaahu Secondary School Kapa Haka competition in Napier, New Zealand, May 2021.
- Rohe-Belmont, P. (2021). Te Takahanga o Tania [Composition]. Mātangirau. Performed by Te Kura Kaupapa Māori o Ngāti Kahungunu o Te Wairoa at Te Haaro o te Kaahu Secondary School Kapa Haka competition in Napier, New Zealand, May 2021.

Performance

- Dennis, R. (Kaikarākia). (2021, June 28). Blessing and opening of Tipuna Whare, Te Hau Ana Nui, Waiohiki, Taradale, New Zealand (Rōpū Tā-i-te-Kawa, Ngāti Pārau, Ngāti Kahungunu, Te Ūranga Waka).
- Dennis, R. (Kaikarākia). (2021). Blessing of pou at Atea-a-rangi, Awatoto, Ahuriri, celebrating Winter, summer, spring and autumn solstice, including Matariki (Rōpū Tā-i-te-Kawa).
- Dennis, R. (Kaikarākia). (2021, August). Blessing of parts of the Oranga Tamariki new building, Ahuriri, New Zealand.
- Dennis, R. (Kaikarākia). (2021, August 25). Blessing of the reopening of Te Whare Pūpuri Taonga (MTG Hawke's Bay), and exhibitions, Kura Taonga: Voices of Kahungunu and For Home and Country, Women's Institutes of Hawke's Bay. Ahuriri, New Zealand (Rōpū Tā-i-te-Kawa).
- Dennis, R. (Kaikarākia). (2021, February 12). Blessing of new pou inside Tipuna Whare, Te Ara a Tāwhaki, Te Ūranga Waka, Eastern Institute of Technology, Taradale, New Zealand (Rōpū Tā-i-te-Kawa).
- Dennis, R. (Kaikarākia). (2021, May 14). Blessing of new pou and kowhaiwhai on mahau of Te Ara a Tāwhaki, Te Ūranga Waka, Eastern Institute of Technology, Taradale, New Zealand (Rōpū Tā-i-te-Kawa).
- Koopu, E. (Iranui-Lead). (2021). Whakapaupākihi [Musical]. Lawson Field Theatre, Te Tairāwhiti Arts Festival 2021, Gisborne, New Zealand, October 10, 2021.
- Marshall, M. (2021). The 2021 Road Trip: Matthew Marshall Guitar [Solo recital]. Music by Bach, Terzi, Mermikides, Norton, Arkhipovsky, Rak, Villoldo. New Zealand nationwide tour (12 venues), July 2-August 15, 2021.

Commission

- Gibbs, S. (2021). Serenity, courage, wisdom [Three multi-media sculptures]. Commissioned for Alcohol & Other Drug Treatment Court/Te Whare Whakapiki Wairua ki Kirikiriroa, Hamilton, New Zealand.
- Lardelli, D. (2021). Whatumanawa toa [Multi-medium]. Commissioned by the Royal New Zealand Navy. Taonga for HMNZS Manawanui Commander Andy Mahoney on his retirement.
- Lardelli, D., & Solomon, M. (2021). Mango kaitiaki moana—Guardian of the seas [Multi-media]. Wakahuia designed and created for Sealord Maurice Eng retirement taonga. Commissioned by the Sealord Group.
- Lardelli, D., & Solomon, M. (2021). Poutangata pou [Four sculptural pieces, multi-medium]. Commissioned by New Zealand Olympic Committee to be installed at New Zealand Team venues for Tokyo Olympics.

Thesis

- Marshall, M. (2021). The evolution of composition for classical guitar in New Zealand [Doctoral thesis, University of Otago, Dunedin, New Zealand]. OUR Archive. <http://hdl.handle.net/10523/12485>
- McFadyen, E. (2021). The importance of people and place: Reimagining school curriculum in Aotearoa New Zealand [Master's thesis, Auckland University of Technology, New Zealand]. Tuwhera Open Access Theses & Dissertations. <http://hdl.handle.net/10292/14216>

Oral Presentation

External

- Clear, A. (2021, July). Tech degrees: International developments [Oral presentation]. Wellington ITx Innovation Day, Wellington, New Zealand and Auckland ITx Innovation Day, Auckland, New Zealand.
- Elliott, S. E., & Chisnell, C. (2021, August). Child sexual exploitation: Overview and implications for health social work [Oral presentation]. Tairāwhiti DHB.
- Erturk, E. (2021, March 17). Digital enablement [Oral presentation]. Ahuriri Rotary Club, Napier, New Zealand.
- Erturk, E. (2021, November 25). Digital inclusion [Oral presentation]. Taradale Rotary Club, Napier, New Zealand.
- Gibbs, S. (2021, May 12-July 21, 2021). Kowhaiwhai presentation and workshop, drawing and printmaking. Hoea! Gallery, Gisborne, New Zealand.
- Gibbs, S. (2021, October 15). Lamentation: Robert Jahnke installation. Series of four Floor talks to kaumatua o Tairāwhiti, on behalf of Dr Robert Jahnke. Te Ara i Whiti [Group exhibition]. Maia Gallery, Te Tairāwhiti Arts Festival, Gisborne, New Zealand, October 8-17, 2021.

- Jagroop-Dearing, A., Walker, T., Sherwood, J., Newbern, C., Marshall, J., Wilson, B., Frendin, T., Jones, N., Baker, M. G., & Gilpin, B. J. (2021, April). What, when, why? Review of a largescale *Campylobacter* outbreak in Havelock North [Oral presentation]. Stortford Lodge Rotary Club, Mangateretere, Hawkes Bay, New Zealand.
- Lardelli, D. (2021, October 9). Tinana [Artist talk]. Te Puwaha Gallery, Te Tairāwhiti Arts Festival, Gisborne, New Zealand, October 8-17, 2021.
- Lardelli, D. (2021, October 16). Tu takawhi [Artist talk]. Toi Maori Gallery, Wellington, New Zealand.
- Lardelli, D. (2021, September 16). Awarua [Digital presentation]. Presented as part of Te Wiki o Te Reo Maori, explaining the design of Awarua Council building. Gisborne District Council, Gisborne, New Zealand.
- McKelvie-Sebileau, P. (2021, October). Systems approaches for health promotion [Guest lecture]. POPLHTH305 Community Nutrition, University of Auckland, New Zealand.
- Morris Matthews, K. (2021, January 31). Please stand for Miss Spencer [Oral presentation]. Hawke's Bay Founders' Society, Havelock North, New Zealand.
- Morris Matthews, K. (2021, February 11). Lifting Horizons: Anna Elizabeth Jerome Spencer—A biography [Oral presentation]. MTG Hawke's Bay, Napier, New Zealand.
- Nikula, P.-T. (2021, May). Ilmastovastuu kansainvälisessä korkeakoulutuksessa (Climate consciousness in international education) [Video presentation]. Kv-kevätpäivät 2021 (Finnish International Education Spring Forum) (Online).
- Nikula, P.-T. (2021, October). New Zealand higher education policy and its coordination [Oral presentation]. Tampere University (Online).
- Nikula, P.-T. (2021, April). Springing into climate action [Oral presentation]. European Association for International Education (EAIE) Community Moments webcast.
- Nikula, P.-T., & van Gaalen, A. (2021, April). Practice and research of climate action in international education [Oral presentation]. Critical Internationalization Studies Network. <https://www.youtube.com/watch?v=6nDGk3Cu2nE>
- Otis, E. L. (2021, May). Thriving in the face of change, challenge and stress—Let's make me resilient [Oral presentation]. Ōtātara Kāhui Ako/Health Hawke's Bay Community Education Forum, Napier, New Zealand.
- Rayner, R. (2021, February). Agility training and testing: From theory to practice [Oral presentation]. HBCFCT/EIT Monthly PD Sessions, Hawkes Bay Community Fitness Centre Trust.
- Shahid, S. (2021, October 5). Nutritional and lifestyle interventions to manage non-communicable diseases in COVID-19 [Invited webinar]. Department of Biochemistry, Jinnah University for Women, Karachi, Pakistan.
- Tipene-Leach, D. (2021, September 28). Moving Māori SUDI prevention away from 'risk' [Oral presentation]. In Sleep me safe: Latest Research on SUDI [Webinar]. Better Start National Science Challenge Webinar Series. <https://www.youtube.com/watch?v=FHPLirxW2al>

- Tipene-Leach, D., & Sherwood, D. (2021, March 16). Choosing Wisely in NZ: A background of inequity [Invited oral presentation]. In Considering equity in reducing low-value care [Webinar]. RACP Evolve Webinar Series 2021. <https://www.youtube.com/watch?v=HUdvagISVKs>
- Walker, R. (2021, November 13-14). Unique issues in HD and the Indigenous populations [Oral presentation]. ANZSN HD Academy 2021 (Online).
- Walker, R. C. (2021, November). Understanding inequities in kidney disease in Aotearoa New Zealand [Oral presentation]. Department Meeting, Otago University, New Zealand.
- Walker, R. C. (2021, November). Rural and remote patients experiences of kidney care [Oral presentation]. Kidney Meeting, Otago University, New Zealand.

Internal

- Baker, P. (2021, July). Pneuma—Expansion and contraction within sculptural practice [Oral presentation]. IDEASchool Staff Research Presentations, IDEASchool, Eastern Institute of Technology, Hawke's Bay, New Zealand.
- Binding, W. (2021, July). 'Landscape' reinventions as analogy for contemporary subjective experience: Disassembly-reassembly, liberation [Oral presentation]. IDEASchool staff research presentations, IDEASchool, Eastern Institute of Technology, Hawke's Bay, New Zealand.
- Chisnell, C. (2021, March 18). Safeguarding children and adults [Oral presentation]. Te Kai a te Rangatira Research Session, Eastern Institute of Technology, New Zealand.
- Dearing, C. G. (2021, November 18). Stryd: A laboratory in a foot pod for runners and for improving health [Oral presentation]. Te Kai a te Rangatira Research Session, Eastern Institute of Technology, New Zealand.
- Erturk, E., Dang, D., & Taylor, B. (2021, August 26). Virtual reality learning activities [Online oral presentation]. Te Kai a te Rangatira Research Session, Eastern Institute of Technology, New Zealand.
- Forrest, R. (2021, April 22). The M.E.K.E. initiative: Meke in Maraenui [Oral presentation]. Te Kai a te Rangatira Research Session, Eastern Institute of Technology, New Zealand.
- Hill, R. (2021, June 17). Wines from the hinterland: Comparing availability and appetite for local wines in two New Zealand destinations. [Oral presentation]. Te Kai a te Rangatira Research Session, Eastern Institute of Technology, New Zealand.
- Honeth, C. (2021, May 20). Viticultural treatments for improving Syrah quality [Oral presentation]. Te Kai a te Rangatira Research Session, Eastern Institute of Technology, New Zealand.
- Matthews, K. M. (2021, March 18). Writing a life: Biography as hybrid [Oral presentation]. Te Kai a te Rangatira Research Session, Eastern Institute of Technology, New Zealand.
- McKelvie-Sebilleau, P. (2021, June 17). Nourishing Hawke's Bay: He wairua tō te kai—What are we doing, and why? [Oral presentation]. Te Kai a te Rangatira Research Session, Eastern Institute of Technology, New Zealand.

- McKelvie-Sebileau, P., & Isaacson, R. (2021, May 6). Ka Ora, Ka Ako school lunch programme in New Zealand [Oral presentation]. EIT Policy Think-Tank Session, Eastern Institute of Technology, Napier, New Zealand.
- Qin, J. (2021, November 18). Investigation of the mouthfeel of Hawke's Bay chardonnay wines and its contributors [Oral presentation]. Te Kai a te Rangatira Research Session, Eastern Institute of Technology, New Zealand.
- Rayner, R., Young, W., & Tapley, S. (2021, October 21). Do current agility training practices in elite Australian football align with the demands of competition? [Oral presentation]. Te Kai a te Rangatira Research Session, Eastern Institute of Technology, New Zealand.
- Rudge, M. (2021, October 21). Picking up the threads: An auto-ethnography of the process and practice of re-making a silk kimono [Oral presentation]. Te Kai a te Rangatira Research Session, Eastern Institute of Technology, New Zealand.
- Teepa, W. (2021, April 22). Mārama: Manuscripts with memory [Oral presentation]. Te Kai a te Rangatira Research Session, Eastern Institute of Technology, New Zealand.

Other Output

- Lardelli, D. (2021, October 11-12). Tinana [Life drawing classes]. Te Puwaha Gallery, Te Tairāwhiti Arts Festival, Gisborne, New Zealand, October 8-17, 2021.
- Nikula, P.-T., & Gaalen van, A. (2021, May 13). Balancing international education and its carbon footprint. *Critical Voices*, 1(4). Critical Internationalization Studies Network. <https://criticalinternationalization.net/2021/05/13/balancing-international-education-and-its-carbon-footprint/>
- O'Connor, N. (Host). (2021). Audio potluck [Audio podcast; episodes 7, 10, 14]. Gizzy Local. <https://anchor.fm/gizzy-local>
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- West, E., Raimo, V., Nikula, P.-T., & Huang, I. (2021, May 29). International recruitment agents can build back better. *University World News*. <https://www.universityworldnews.com/post.php?story=20210526083309797>

