

Book of Abstracts ITP Symposium

2-6 December 2024



ITP Symposium

OP·SIT·ARA

Unitec·MIT

Virtual



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ITP Symposium 2024

The 2024 ITP Rangahau and Research Symposium was held the week of December 2-6 as four events in Tāmaki Makaurau | Auckland; Ōtautahi | Christchurch; and Wānanga Ipurangi | Online. The purpose of the symposium is to showcase the diversity of research undertaken by staff and postgraduate students across the vocational sector, and to build new connections across the network. The symposium was a great success, with presentations from both experienced and emerging researchers on a diverse range of topics and methodologies.

Each event was locally driven and delivered. The week began with an in-person symposium hosted by Unitec and MIT at their Wairaka campus on Monday 2 and Tuesday 3 December. A Pacific Research Stream was also hosted by Unitec and MIT on the same days, running in parallel. A virtual symposium event was held online on Wednesday 4 December, in which researchers from across Te Pūkenga presented live online talks. The week finished with an in-person symposium event, OPSITARA 2024, hosted by Ara at their Madras St campus on Thursday 5 and Friday 6 December. Several online keynote and workshop events also took place during the week.

Abstract submission was open between 16 June and 18 September through a joint portal. Research Presentations, Creative Practice Presentations, Research Posters, and Research Community of Practice meetings were options for in-person presentation, with Talanoa also available as an option in the Pacific Stream. Over 280 abstracts submitted and over 230 presentations delivered across the symposium events, and all abstracts were peer reviewed before acceptance.

This Book of Abstracts contains the final symposium programme and abstracts for all presentations delivered at the symposium. Abstracts are ordered by event, then presentation type, and then by corresponding author first name.

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Symposium Programme

ITP Research Symposium Day 1, Monday December 2

MIT-Unitec Stream, Wairaka | Mount Albert Campus

Mihi Whakatau and Keynote – 8:45 – 10:00: Tagaloatele Peggy Fairbairn-Dunlop

Red Lecture Theatre – B180 – 001

Pacific research: Who speaks and who hears?

Tagaloatele Peggy Fairbairn-Dunlop is Sa Teo, Sa Petaia and Sa Atoa. Her title is from Lauilii. Tagaloatele's parents Emele-Moa Te'o and James Fairbairn migrated with their five children to Wellington in the 1940s, where Tagaloatele and her sister were born. Tagaloatele's career comprises a many levelled mix of teaching and research, national planning and policy making and, 'recording our stories before these are lost.' She completed a Dip Teaching at Wellington Teachers' College (WTC) and with her husband Jim taught at Maori designated and Porirua primary schools before returning to WTC as Lecturer in Education. In 1980 they moved to Samoa with their five daughters when Jim was appointed Head of English at Avele College. That year, Tagaloatele wrote up her VUW Masters (*Samoan parents' perceptions of primary schooling in New Zealand*) and then taught at the Samoa Secondary Teachers' College followed by 15 years at the USP School of Agriculture (Alafua) specialising in agriculture education and extension, farming systems and gender and youth equity issues. She completed a Ph D at Macquarie University (*E au le Inailau a Tamaitai: Samoan Women and Development*) and on her return to Samoa held several UN regional posts, including Sustainable Human Development Adviser (UNDP), Pacific UNIFEM and, Social Sciences Adviser (UNESCO). Tagaloatele returned to New Zealand in 2006 to be Inaugural Director of VUW's Va'aomanū Pasifika before moving to AUT as Professor of Pacific Studies. Presently she is a member of the Te Pūkenga Council, volunteers at the Sally Shop, supervises a doctoral student and, 'has time to write.'

Morning Tea – 10:00 – 10:25

Te Puna

Session 1 – 10:30 – 11:50

B180 - 2044
Te Ao Taketake

B180 – 2045
Climate adaptation and resilience

B182 - 2001
Inequality and Justice

Session Chair: Jamie Smiler	Session Chair: Arun Deo	Session Chair: Jason Hallie
Architecture of Aroha: Weaving Indigenous Knowledge and Cultural Sovereignty through Wahakura and Gietkka Tanya White (Unitec) Gunvor Guttorm (Sami)	Te Ararata West, Low Impact Flood Mitigation Strategy Matthew Bradbury (Unitec) Rury FitzSimmon (Unitec)	Social Work in a Neoliberal Context: Reinforcing Inequalities or Catalyzing Change? Christian Schroeder (htw saar / Unitec)
Incorporating the Five Values of Te Noho Kotahitanga in Peer Review Craig Robertson (Unitec) Antoinette Wessels (Unitec) Nick Kearns (Unitec) Paul Shadbolt (Unitec)	Mandatory Climate Risk Reporting: Insights from New Zealand Firms Sujani Thrikawala (Wintec) Ninitha Hamza Koya (Wintec) Ahesha Perera (Massey University)	Education at the crossroads: To be social justice or not to be? Jason Hallie (Unitec) Craig Tunnicliffe (Unitec)
I am wahine, hear me roar! Wahine raising awareness by vocalising their experiences and identifying how psychological abuse is exposed in relationships Laura Daniels (MIT) Melanie Wong (MIT)	Impervious Surfaces and the Future of Urban Design in Tāmaki Makaurau Matthew Bradbury (Unitec) Mikolay Popov (Unitec)	From Transdisciplinarity to Community Based Participatory Research - The Masters programme in Social Practice Geoff Bridgman (Unitec)
Storytelling and Genealogies as a Transfer Mechanism Across the Generations James Prescott (Unitec) Nadesa Goundar (Unitec)		Addressing the needs of the community in responding to the youth justice system Melanie Wong (MIT) Dennis Thomas Sanga (MIT) Moerangi Potiki (MIT) Lois Naera (MIT) Rebecca Crosby (MIT)

Lunch – 12:00 – 12:35

Te Puna

Session 2 - 12:40 - 2:05

B180 – 2045 Teaching and Learning	B183 - 1104 Social Practice
Session Chair: Kate Lewis	Session Chair: Melanie Wong

Miss Kate Lewis (Eastern Institute of Technology) Tim Gander (Academy Ex)	Unleashing the power of Community funders and philanthropics: The economic and social benefits of investing in impact-first housing projects Sam Cummins (BayTrust)
Tauira kaiako relational ecology: Sustained regard for personal circumstances and collective commitment Pauline Bishop (Unitec) Mary-Liz Broadley (Open Polytechnic) Kiri Gould (University of Auckland) Rebecca Hopkins (Auckland University of Technology) Yo Heta-Lensen (Auckland University of Technology) Andrew Gibbons (Auckland University of Technology) Jacoba Matapo (Auckland University of Technology)	Social Workers in Schools: from an Educator's perspective (20m) Karen Leathem (MIT)
The benefits of a self-development process to learners undertaking a professional practice research degree James Harrison (Otago Polytechnic) Jo Kirkwood (Otago University)	Training future social workers: Learning beyond the classroom Dennis Thomas Sanga (MIT) Melanie Wong (MIT)

Session 3 - 2:10 - 3:30

B180 - 2044 Architecture and Urban Planning	B180 – 2045 Teaching and Learning	B182 - 2001 Gender, Identity, and Empowerment
Session Chair: Iman Khan	Session Chair: Tahera Afrin	Session Chair: Nigel Pizzini
The Architecture of W.H. Gummer Cameron Moore (Unitec)	Transnational higher education: Challenges and opportunities of teaching online during the COVID-19 time Xueqin Tan (NorthTec)	Barriers Male Secondary Students encounter when considering counselling at school Nigel Pizzini (Unitec) Geoff Bridgman (Unitec)
Exploring the current status of digital technologies implementation in New Zealand construction industry. Mohammad Afjalur Rahman (Unitec)	Exploring best online assessment practices to cultivate academic integrity in nursing education in the current era of educational digitalisation and massification Johanna Meintjes (MIT)	Constructing Gender Identities on Social Media: A Study of Young Adults in Aotearoa New Zealand Canan Ezel Sertkaya (Unitec)
The Value of Digitalisation in Aotearoa New Zealand: Perspectives from Focus Group Discussions Iman Khan (Unitec) Renata Jadresin Milic (Unitec) Viola Vadasz (Unitec)	Applying a neurodiverse lens to our teaching: Is it possible? Tahera Afrin (Unitec)	Rise of Women Skateboarding in Aotearoa, New Zealand John MacFarlane (Unitec)

Urban Growth and Climate Resilience in Auckland and the Golden Triangle Matthew Bradbury (Unitec) Shubing (Susan) Diao (MIT)	Bridging and Foundation Education: Hopeful and helpful, or challenging and a force for change. Helen Anderson (Wintec)	Inside out: a pathway toward non-custodial, therapeutic support facilities for justice-involved women in Aotearoa Narelle Douglas-McAllum (Unitec)
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Session 4 - Poster Session & Afternoon Tea – 3:30 - 4:10		
Te Puna		
Poster Topics		
Exploring Key Factors Influencing Construction Waste Generation in New Zealand Projects Omer Altaf (Otago Polytechnic) Matias Kaufman (BECA) Firas Almughrabi (Otago Polytechnic) Priyanka Raina (Otago Polytechnic)	Visualizing Digital Research: A Comparative Analysis of Netnography and Social Media Data Analysis Techniques. Michael Darby (NMIT)	Skateboarding Provision in Aotearoa, New Zealand: A Case of Providing for Oneself John MacFarlane (Unitec)
Puna Kōrero – Marae Based Creative Placemaking in the Wairaka Precinct Leon Tan (Unitec) Tanya White (Unitec) Peeti Lamwilai (Unitec) Michael Craven (Unitec) Hohepa Renata (Unitec) Cris De Groot (Unitec) Emma Smith (Unitec) Allana Goldsmith (University of Auckland / Independent Musician)	Myocardial Complexity, Apparent Fiber Density and Fixel Number within an Infarct Alexander Wilson (Unitec) XJ Kang (Veteran Affairs Palo Alto) Tyler Cork (Stanford University) Luigi Perotti (University of Central Florida) Daniel Ennis (Stanford University)	Development of a hybrid optoelectronic radiation sensor Marilou Raduban (Unitec) Pornnapha Mangthong (Nakhon Pathom Rajabhat University) Michal Kohout (Institute of Physics of the Czech Academy of Sciences) Kota Hibino (Nagoya Institute of Technology) Yuki Maruyama (Nagoya Institute of Technology) Zdeněk Hubička (Institute of Physics of the Czech Academy of Sciences) Shingo Ono (Nagoya Institute of Technology) Jiří Olejníček (Institute of Physics of the Czech Academy of Sciences) Nattapon Srisittipokakun (Nakhon Pathom Rajabhat University) Jakrapong Kaewkhao (Nakhon Pathom Rajabhat University)
Coastal Processes/Hazards, Ecological Assessment and Construction: Hobsonville Seawall, Auckland, NZ Dave Phillips (Unitec) Shaw Mead (eCoast) Jai Davies-Campbell (eCoast)		

Session 5 - 4:10 - 5:35		
B180 - 2044 Bridging Cultures and Economies: Organizational Change, Microfinance, and Digitalisation	B180 – 2045 Science in Action: Health Innovations, Sustainability, and Preparedness	B182 –2001 Digital, Environmental and Cultural Studies
Session Chair: Jamie Smiler	Session Chair: Dalya Al-Mohamadamin	Session Chair: Ziming Qi
Comparative Study on Cultural Dimensions of Organisational Change in India and New Zealand IT Industry Bing Dai (Otago Polytechnic) Mohak Sharma (Otago Polytechnic) Steve Barnett (Otago Polytechnic)	Enhancing Salivary Secretion in Sleep Apnea Patients Undergoing CPAP Therapy: A Novel Approach with Oscillation Therapy Dalya Al-Mohamadamin (MIT) Dhuha Abdul-hameed (Western University, Canada) Salem Kadouri (Simmelweis University, Hungary)	Mathematics teaching strategy for Graduate Diploma in Supply Chain and Shipping Management Ziming Qi (MIT) Shubing (Susan) Diao (MIT) Dave Hope (MIT) Nicola Pretty (MIT) Malcolm Brown (MIT)
A Comparison of Rural and Urban Microcredit Group Behaviour and Performance Denis Griffin (Eastern Institute of Technology)	Benefits and limitations of weight loss and gas flow measurement for long duration micro-fermentation monitoring Jonathan Muhl (SIT)	From Shadow to Streets: The Rise of Chinese Cultural Visibility in Auckland Zhi Chen (Unitec)
From Surviving to Thriving: How Digitalisation Supports Retail SMEs Yury Zhukov (Otago Polytechnic) Abhinav Kumar (Otago Polytechnic) Sharan Singh (Otago Polytechnic)	The Biophilic Bug Vaughan Shepherd (Unitec)	"She'll be right"; or will she? Factors influencing MITs' knowledge, understanding and perceived competence when using digital imaging technology Joanna Thorogood (Unitec)
		Bridging Classroom and Clinical Practice: The Impact of Team-Based Learning in Imaging Interpretation Joseph Aziz (Unitec) Joanna Thorogood (Unitec) Sarah Vivier (Unitec)
End of the day remarks and closing karakia from Session Chair (5m)	End of the day remarks and closing karakia from Session Chair (5m)	End of the day remarks and closing karakia from Session Chair (5m)

ITP Research Symposium Day 2, Tuesday December 3

MIT-Unitec Stream, Wairaka Campus

Welcome Back and Karakia 8:50 – 9:00

Te Puna

Session 6 - 9:00 – 10:20

B183 - 2007 Digital Health and Art	B182 – 2002 Construction
Session Chair: Jamie Smiler	Session Chair: Malachy McGarrigle
Examining factors influencing the use and adoption of digital health technologies among older consumers: Are we providing our older population with what they want? Abi Mosbah (MIT)	Estimating the Cost of Digital Twin Technology in Enhancing Site Safety - A Case Study of NZ Construction Project Srividya Krishnamoorthy (Otago Polytechnic) Priyanka Raina (Otago Polytechnic) Sibele Goulart Corbetta (Otago Polytechnic) Waruni Hewage (Otago Polytechnic)
I am a teacher but not just a teacher. I am an Art teacher and that makes me different. My studio is my classroom, a negotiated space. A home to many artists every day. Kirsten Price (Open Polytechnic)	A systematic review of Lean in Construction research in New Zealand academia. Mohammad Afjalur Rahman (Unitec)
	Development of learning resources for teaching design of light steel framed houses in New Zealand. Malachy McGarrigle (Unitec)
	Te Atatu Peninsula Residential Development Civil Engineering Infrastructure Design Cindy Murillo Dave Phillips (Unitec)

Morning Tea – 10:25 – 10:40

Te Puna

Session 7 - 10:40 - 12:00

B183 - 2007 Artificial Intelligence	B182 – 2002 Electrotechnology	B108 – 1016 (Art House) Creative Practice Presentation
Session Chair: Eric Boamah	Session Chair: Alireza Gheitasi	Session Chair: Nicol Sanders-O'Shea
Students Perspective on Use of ChatGPT in Civil Engineering Education-Phase 1 Babar Mahmood (Unitec) Edward Chai (Unitec)	Impact of Electric Vehicle Fast Charging on the Power System Voltage stability Momen Bahadornejad (Unitec) Hooman Zarreh (Unitec)	SUSS: Reimagining Gendered Social Constructs (30m) Nicol Sanders-O'Shea (Toi Ohomai); Darcell Apelu; Donna Dinsdale; Anne Shirley; Lynette Fisher; Heidi Douglas
Transformative effects of AI on tertiary education Eric Boamah (Open Polytechnic) Ibrahim Rahman (Open Polytechnic) Simon Park (Open Polytechnic)	Assessment of Superconductor Efficiency in Practical Electric Motor Applications Alireza Gheitasi (MIT)	Serious Games: the use of custom playing cards in Materials Engineering education (30m) Jonathan Muhl (SIT)
Exploring the use of AI (Artificial Intelligence) in construction contract administration Omer Altaf (Otago Polytechnic) Srividya Krishnamoorthy (Otago Polytechnic) Guihang Xue (Otago Polytechnic)	Power-Profile and Thresholding Assisted Feedforward Neural Network based NILM method applied to Balanced Data Pieter Nieuwoudt (MIT) Snjezana Soltic (MIT) Leila Kayabi (MIT) Shafigur Tito (Wintec)	Walking Upstream in Kirikiriroa (30m) Becca Wood (Unitec)
	Integrating Photovoltaic and Wind Power into New Zealand's Renewable Energy Ecosystem Alireza Gheitasi (MIT)	

Session 8 - 12:00 - 1:00	
B182 – 2002 Engineering, Minds and Inclusive Spaces: Early Childhood Play and Accessibility	B183 - 2007 Engineering and Manufacturing Advances
Session Chair: Suhaimi Abd-Latif	Session Chair: Paul Oke
Bridging Professions: Inclusive Creative Arts Experiences to Support Inclusion in Early Childhood and Beyond Michelle Johnson (Unitec)	Engine bore reconfiguration Niranjan Singh (Unitec) Paul Oke (Unitec)
Knowledge, attitudes, and practices of New Zealand council members regarding public playground development and accessibility for children with disabilities. Suzie Belcher (Wintec) Nicole Crump (Wintec) Kesava Kovanur Sampath (Wintec)	Framework for developing an automated manufacturing cell Matthew Macklin (Unitec) Paul Oke (Unitec) Nigel Yee (Unitec) Alireza Gheitasi (MIT)
Childhood Play Schemas as an Indication of Engineering Interest: A Literature Review Suhaimi Abd-Latif (Otago Polytechnic) Carleen Mitchell (Otago Polytechnic) Norasieh Md Amin (Unitec)	

Whakakapi – Wrap-up and Award Ceremony – 1:05 - 1:30
Te Puna

PD Workshop – Research Funding 2:30 – 4:30

Virtual Room

External Funding for Beginners: An Interactive Session for Information and Inspiration

Workshop Outline: The process of applying for and managing a grant can be in equal parts exhilarating and frustrating. How do you find a grant to apply for? What is the process? How do you pitch your idea? And what are the challenges if you actually win one? Our presenters will share their stories. How they got started, how they presented their cases for funding, and, in some cases, how they picked themselves up when their applications were declined.

Presenter Biographies:

Paul Woodruffe is a visual artist and multi-disciplinary designer and a Senior Lecturer in Creative Industries at Unitec. He's represented by Föenander Galleries in Mt Eden, Auckland, and has work in private and public collections in NZ, Europe, Australia, and the USA. Paul established the Piki Toi project as a partnership with Lifewise Trust in 2017 in response to problems identified in the publication "Inside the Cup", a document produced by Lifewise for Auckland Council on begging within the central city. Over the course of the project, Paul secured grants from multiple sources to progress the project.

Dr Kristie Cameron is an Associate Professor in animal behaviour, welfare and husbandry at Unitec. Kristie is an active researcher with experience in writing grant proposals and working with industry to apply theoretical principles to real-world problems. Kristie is also the convenor of the Unitec Early Career Researcher forum and a Co-chair of the Royal Society Te Apārangi Early Career Researcher Committee.

Daisy Bentley-Gray: is a passionate advocate for Pacific education and research. She holds the position of Pacific representative on the Unitec Research Committee, Academic Committee, and Research Ethics Committee and leads the Unitec Pacific Research Fono, where she empowers and promotes Pacific research among Pacific staff. Daisy is a key researcher on an Ako Aotearoa funded project "Addressing Racial Equity & Justice in the Tech Sector for Pasifika learners in Aotearoa New Zealand".

Dr Samantha Heath is a Senior Lecturer in Nursing at the University of Waikato with a clinical background in children's nursing. She has focussed on the development of education for healthcare professionals through past clinical and academic roles and research interests in the UK and New Zealand. In 2021 Samantha was awarded a prestigious Whitinga Fellowship to investigate how the nursing curriculum might need to be adapted to accommodate New Zealand's ageing population.

Brenda Massey is a Senior Grants Advisor at Tūāpapa Rangahau, Unitec's Research and Enterprise Office. She helps staff seek and win external funding for research, as well as managing some of Unitec and MIT's internal grants schemes.

Gregor Steinhorn is Unitec's Research Partner - Enterprise. With a background in biotechnology, commercialisation and entrepreneurship he supports academics in engaging with industry, communities and government organisations. As part of this role Greg has helped with many grant applications and been involved in several research centres.

ITP Research Symposium Day 1, Monday December 2

Pacific Stream, Wairaka Campus

Mihi Whakatau and Keynote – 8:45 – 10:00: Tagaloatele Peggy Fairbairn-Dunlop

Red Lecture Theatre – B180 – 001

Pacific research: Who speaks and who hears?

Tagaloatele Peggy Fairbairn-Dunlop is Sa Teo, Sa Petaia and Sa Atoa. Her title is from Lauili. Tagaloatele's parents Emele-Moa Te'o and James Fairbairn migrated with their five children to Wellington in the 1940s, where Tagaloatele and her sister were born. Tagaloatele's career comprises a many levelled mix of teaching and research, national planning and policy making and, 'recording our stories before these are lost.' She completed a Dip Teaching at Wellington Teachers' College (WTC) and with her husband Jim taught at Maori designated and Porirua primary schools before returning to WTC as Lecturer in Education. In 1980 they moved to Samoa with their five daughters when Jim was appointed Head of English at Avele College. That year, Tagaloatele wrote up her VUW Masters (*Samoan parents' perceptions of primary schooling in New Zealand*) and then taught at the Samoa Secondary Teachers' College followed by 15 years at the USP School of Agriculture (Alafua) specialising in agriculture education and extension, farming systems and gender and youth equity issues. She completed a Ph D at Macquarie University (*E au le Inailau a Tamaitai: Samoan Women and Development*) and on her return to Samoa held several UN regional posts, including Sustainable Human Development Adviser (UNDP), Pacific UNIFEM and, Social Sciences Adviser (UNESCO). Tagaloatele returned to New Zealand in 2006 to be Inaugural Director of VUW's Va'aomanū Pasifika before moving to AUT as Professor of Pacific Studies. Presently she is a member of the Te Pūkenga Council, volunteers at the Sally Shop, supervises a doctoral student and, 'has time to write.'

Morning Tea – 10:00 – 10:25

Te Puna

Session 1 – 10:30 – 11:50

B183 - 1104

Pacific Peoples' Wellbeing in the Diaspora (1)

Session Chair: Daisy Bentley-Gray
Exploring the support system for the carers of the Pacific older adults Fuatino Petelo (MIT) Naomi T Akulu-Haulangi (MIT) Lydia Teatao (MIT)
Tamaitai Samoa: An Autoethnographic Analysis of Cultural Principles Contributing to the Wellbeing of Samoan Young Women in Aotearoa New Zealand Flora Apulu-Feausiga (Unitec)
Intersections of faith and abuse. A study of Samoan Social Work practitioners insights into family violence. Genevieve Sang-Yum (Unitec)
Pre-stroke knowledge of the ‘FAST’ symbol among Senior Samoans and Tongan peoples Louise Rummel (MIT) Fololi Lologa-Iosua (MIT) Dr Deborah Rowe (MIT) Omana Thomas (MIT) Premila Kumar (MIT) Jas Deol (MIT) Anna Cullen (MIT)

Lunch – 12:00 – 12:35
Te Puna

Session 2 - 12:40 - 2:05
B183 - 1104 Education, Curriculum and Pedagogy
Session Chair: Evangelia Papoutsaki
The Significance of Transformative Praxis for Pasifika Phenomenal Educators and the Pursuit of Teaching Beyond Conventional Limits. Krishan K Mani (MIT)* Misa Fia Turner-Tupou (MIT) Naomi T Akulu-Haulangi (MIT)
Talanoa as a research framework for culturally responsive pedagogy

Lata Rana (Unitec)* Yvonne Culbreath (Unitec)
Addressing Racial Equity and Justice in the Tech Sector for Pasifika learners in Aotearoa NZ Marion Muliaumaseali'i (External) Daisy G Bentley-Gray (Unitec) Aki Te'evale (Unitec) Evangelia Papoutsaki (Unitec)
Using fatele to support the preservation of Tuvaluan culture as it prepares to become the world's first digital nation Antoinette Wessels (Unitec) Molia Alama (Unitec)

Session 3 - 2:10 - 3:30
B183 - 1104 Pacific people's wellbeing in the Diaspora (2)
Session Chair: James M Prescott
Seasonal Employment Schemes and Wellbeing: Opportunity or pitfall for Pacific People James M Prescott (Unitec) Nadesa Goundar (Unitec)
Cultivating Resilience Rahul Chand (Unitec)
Exploring the challenges that immigrant parents face in parenting their children in New Zealand Jati Maunana (MIT)
Make A Statement: Family Violence and Pasifika in South Auckland Sione Fakahau (MIT)

Session 4 - Poster Session & Afternoon Tea –3:30 - 4:10
Te Puna
Poster Topics

Exploring Key Factors Influencing Construction Waste Generation in New Zealand Projects Omer Altat (Otago Polytechnic)	Puna Kōrero – Marae Based Creative Placemaking in the Wairaka Precinct Leon Tan (Unitec) Tanya White (Unitec)	Skateboarding Provision in Aotearoa, New Zealand: A Case of Providing for Oneself John MacFarlane (Unitec)
Visualizing Digital Research: A Comparative Analysis of Netnography and Social Media Data Analysis Techniques. Michael Darby (NMIT)	Myocardial Complexity, Apparent Fiber Density and Fixel Number within an Infarct Alexander Wilson (Unitec) XJ Kang (Veteran Affairs Palo Alto) Tyler Cork (Stanford University) Luigi E Perotti (University of Central Florida) Daniel Ennis (Stanford University)	Development of a hybrid optoelectronic radiation sensor Marilou Raduban (Unitec) Jakrapong Kaewkhao (Nakhon Pathom Rajabhat University)

Session 5 - 4:10 - 5:35	
B183 - 1104 Education: Pacific Learners & Engagement	
Session Chair: Rokosiga Morrison	
Embedding Pacific Content: A Pathway to Improved Student Engagement Rokosiga Morrison (Unitec) Lee-Anne Turnton (Unitec)	
By Ākonga for Ākonga Leanne Kapoor (Unitec)* Monique Bell	
Identifying Effective Pastoral Strategies for Pasifika learners' Success Krishan K Mani (MIT) Anamua Lole (MIT)	
End of day remarks and closing karakia from the Session Chair (5m)	

ITP Research Symposium Day 2, Tuesday December 3

Pacific Stream, Wairaka Campus

Welcome Back and Karakia 8:50 – 9:00

Te Puna

Session 6 - 9:00 – 10:20

B183 - 1104

Postgraduate / Student Research / Talanoa

Session Chair: Ioane Aleke Fa'avae

Decolonising play (15m)

Susan J Wake (Unitec)

Lyrck Maiava (Unitec)

Inspiring students leads to success of Pacific students' Industry project in the Bachelor Applied Technology (BAT) at Unitec Institute of Technology (15m)

Jone Tawaketini (Unitec)

Vagahau Niue: Sustaining a Realm Nation Language through Tertiary Education (15m)

Ioane Aleke Fa'avae (Unitec)

Morning Tea – 10:25 – 10:40

Te Puna

Session 7 - 10:40 - 12:00
B183 - 1104 Talanoa
Session Chair: Daisy Bentley-Gray
Empowering Māori and Pacific Learners: Success through SPECCASS Initiatives (15m) Ioane Aleke Fa'avae (Unitec)
Talanoa with Participants and Attendees

Whakakapi – Wrap-up and Award Ceremony – 1:05 - 1:30
Te Puna

ITP Research Symposium Day 3, Wednesday December 4

Virtual Stream, Online

Whakatūwheratanga – 8:45 – 8:55

**Home Room
Mihi and karakia**

Session Chair: Jamie Smiler

The Virtual day of the symposium will open with a mihi and karakia for all attendees and presenters. The Virtual Stream will be run on Zoom with a Home room and three Virtual Rooms that participants will be able to access throughout the day. When you join the Zoom you will be able to self-select the Virtual Room and presentations you wish to participate in.

Session 1 – 9:00 – 10:30

Virtual Room 1 Teaching and Learning	Virtual Room 2 Nursing	Virtual Room 3 Engineering
Session Chair: John Archer	Session Chair: Jamie Smiler	Session Chair: Arun Deo
How to retain students? Findings from a student attrition study in NorthTec Ange Dang (Northtec)	Comparative Analysis of Motivational Factors to Increase the Selection of a Career in the Nursing Profession Evan Madden (SIT) Paula Stephenson (SIT)	Appropriation of Engineering Discourse through the Technological Design Process Mathew Thomas (OPNZ)
What is the value in researching, writing and facilitating learning from localised organisational case studies in contemporary New Zealand business education? John Archer (SIT)	Faith and Resilience in Nursing Debbie Watson (SIT)	
Rhetoric vs Reality - Repositioning the Key Competencies in Curriculum Design Neetha Mudhan (Otago Polytechnic)	Work-Life Balance and Nurse(s): A Review of Literature Natasha Cunningham (SIT) Jalal Mohammed (University of Canterbury)	Non-Renewable Energy Use in Solar-Powered Streetlight Operations: Case Study for Invercargill, New Zealand Naveed Rehman (SIT)

Bridging the Gap: The Impact of Agents on Chinese Students in New Zealand Daisy Xu (Whitireia & WelTec) Brian Cao (Whitireia & WelTec)	Do Nursing Students Find Learning Contracts Improve Clinical Skills During Clinical Placement? Michelle Miller (SIT) Hina Ali (SIT)	Micro-Plastics & Urban Waterways Invercargill Karen Luttrell (SIT)
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Session 2 – 10:35 – 11:35

Virtual Room 1 Teaching and Learning	Virtual Room 2 Nursing	Virtual Room 3 Technology and Management
Session Chair: Kerry Purdue	Session Chair: Jamie Smiler	Session Chair: Asma Munir
“You’re not competent if you’re Autistic”: Barriers and facilitators to identity development in teachers with disabilities in Early Childhood Education. Kerry Purdue (Open Polytechnic) Erin Hall (Open Polytechnic) Derek Hartley (Open Polytechnic) Jackie Solomon (Open Polytechnic)	Evidence for continuing competence and professional development requirements for Aotearoa midwives: Insights from a literature review. Cara Baddington (Otago Polytechnic) Brigid Beehan, New Zealand College of Midwives Te Paea Bradshaw, New Zealand College of Midwives)	Is The Gap between Technology and Management Practice Dangerously Widening? Ash Malhotra (NMIT)
The use of digital tools for learning by neurotypical and neurodiverse animal science students Chloe Mc Menamin (Unitec) Kristie Cameron (Unitec)	Using data from the New Zealand Health Survey to identify health promotion opportunities for lesbian, gay and bisexual people Jeffery Adams (Eastern Institute of Technology) Jintana Jankhotkaew (Massey University) Sonja Ellis (University of Waikato) Stephen Neville (Te Pūkenga)	Re-Evaluating Employment Policies for Public-Facing Roles: Expanding Legal Obligations and Implications for Industry Engagement and Student Project Management—Lessons from the Dr Siouxsie Wiles Case Terry Quilty (Manukau Institute of Technology) Jonathan Armougum (Manukau Institute of Technology)
	Ko wai au? Identifying barriers for tauwi (non-Māori) practitioners developing cultural safety: initial stage Lorna Allott (SIT)	Enhancing Indigenous enrolment in Construction qualifications Sina Mualia (Otago Polytechnic) Rehan Masood (Otago Polytechnic) Nayani Landage (Otago Polytechnic)

Session 3 – 11:40 – 12:40

Virtual Room 1 Teaching and Learning	Virtual Room 2 Health and Wellbeing	Virtual Room 3 Accounting and Finance
Session Chair: Michael Darby	Session Chair: Jamie Smiler	Session Chair: Wajira Dassanayake
Classifying Online-Only Research Methods: Assessing the potential of Netnography, Social Media Analysis, and Emerging Digital Techniques for use in post-graduate research. Michael Darby (NMIT)	The time of our lives: how the oldest old are enriching our understanding of successful ageing Trish Conradson (SIT)	Impact of AIRBNB on rental affordability in selected New Zealand cities Jie Chen (Unitec Institute of Technology)
Value Engineering Processes adopted in the Construction Industry – A literature synthesis Samanthi Menike (SIT)	Domains and attributes of cultural competency among healthcare providers caring for vulnerable clients: An integrative review Jenica Ana Rivero (SIT) Reen Skaria (SIT) Jenica Ana Rivero (SIT) Michael Joseph Dino (Our Lady of Fatima University)	Perceptions of Southland Organisations: Required Skills of Accounting Graduates and Accounting Project Needs. Kay McKinnel (SIT) Lynley Woodward (SIT) Robyn Valentine (SIT)
	Cadmium, lead and nickel pollutants in Hawke's Bay vegetables Chey Dearing (Eastern Institute of Technology) Zhijing Ye (Eastern Institute of Technology) Glen Robertshaw (Eastern Institute of Technology)	Discovering the predictive power of statistical and machine learning techniques on the New Zealand stock market indices Aman Anand (Woolworths); Wajira Dassanayake (Unitec)

Session 4 - 1:00 - 2:00

Virtual Room 1 Technology	Virtual Room 2 Nature, Technology and Human Performance	Virtual Room 3 Business and Finance
Session Chair: Omer Altaf	Session Chair: Emre Erturk	Session Chair: Mark Wilson
Integrating BIM Frameworks for NZ Construction Digitalization Rehan Masood (Otago Polytechnic) Nick Wilson (Otago Polytechnic) Omer Altaf (Otago Polytechnic)	Are Our Institutes of Technology Ready for Industry 6.0? Emre Erturk (Eastern Institute of Technology) Istvan Lengyel (Eastern Institute of Technology) Ian Purdon (Eastern Institute of Technology)	Donation motivations and behaviour in Aotearoa New Zealand during financially challenging times. Robyn Valentine (SIT) Bronwyn Sadler (SIT)
LEED rating analysis of Student hostel building Rehan Masood (Otago Polytechnic) Ethan Ludlow (Otago Polytechnic) David Finnie (Otago Polytechnic)	Surfer Nature Connection Duncan McKenzie (SIT)	Determining New Zealand homeowners' understanding of capital gains tax Mark Wilson (Nelson Marlborough Institute of Technology)

Bill Morrison (Otago Polytechnic)		
	Relationship between the moment-arm distance of the human patella tendon and maximum torque production at high velocity Joanne Trezise (SIT)	Exploring NZX 10 stock movements: tapping into the predictive power of statistical and machine learning models. Keshika De Soysa (Unitec) Wajira Dassanayake (Unitec)

Session 6 - 3:05- 4:00

Virtual Room 1 Interactive Session - Professional Development Workshop Research and AI: When your friend is your foe
<p><i>"It is the obvious which is so difficult to see most of the time. People say, 'It's as plain as the nose on your face.' But how much of the nose on your face can you see, unless someone holds a mirror up to you?" - Isaac Asimov, I, Robot.</i></p> <p>In this interactive discussion on Research and AI we will start with looking at how AI introduces itself as a friend, an aide, to research. We will look at some interesting AI tools out there and some ways prompts can be used to get the researcher thinking in yourself as well as aid in the research process. AI can take simple repetitive tasks from us with ease, giving us time to do the complex. And, if it is too hard, such as having to manually work out a chi square, AI can guide and teach us through the complex. But just as AI is a friend to a researcher it also poses darker ethical risks around data, whose data, what data, and what happens to our own interactions with AI. This is an opportunity to talk deeply about AI and Research.</p> <p>Facilitated by Fiona Beals (Whitireia & Weltec) Ahmed Al-Sadi (Whitireia & Weltec)</p>

Session 7 – 4:00 - 4:15

Home Room End of Day Wrap up
Session Chair: Jamie Smiler
This session will wrap up Day 3 of the ITP research symposium and the Virtual Stream with comments from Session Chairs and presenters.

ITP Research Symposium Day 4, Thursday December 5

OPSITARA Symposium, Madras St Campus, Ara Institute of Canterbury

Mihi Whakatau: 09:00 – 09:40

Level 2 Atrium, Kahukura (K Block)

Morning Tea: 09:40 – 10:00

K213a, Kahukura (K Block)

First Keynote: 10:00 – 10:50: Associate Professor Moana Waitoki

D Lecture Theatre

He piko he taniwha, he taniwha rau/ On every bend a chief. Growing researcher practice and praxis

What does it mean to conduct research that critically engages with the lived realities of communities? How can researchers ensure their work meaningfully contributes to societal transformation? Mātauranga Māori, as a dynamic system of Indigenous knowledge, challenges Eurocentric paradigms by offering relational and intergenerational approaches to addressing complex issues. Critical Indigenous research methodologies emphasise relationality, reciprocity, cultural integrity, and the co-creation of solutions rooted in community values. This presentation positions mātauranga Māori as central to developing sustainable, life-affirming responses to systemic challenges. It critically examines how entrenched colonial structures perpetuate inequities highlighting the potentiality of Indigenous knowledge within research paradigms. Through examples of Māori resistance and regeneration, it illustrates the transformative potential of Indigenous knowledge systems in advancing

enduring and equitable societal change. I offer examples of research that has pivoted from what was intended to show the importance of reflecting the needs of the community.

Dr Waikaremoana Waitoki (Ngāti Hako, Ngāti Mahanga) is an Associate Professor in Te Pua Wānanga ki te Ao Faculty of Māori and Indigenous Studies at the University of Waikato - with interests in mātauranga Māori, health/hauora and Māori wellbeing and the social determinants of health. She is a past president of the New Zealand Psychological Society and Co-Convenor of He Paiaka Totara, the Māori Psychologists Network. Moana is a founding member of the Asia Pacific Psychology Alliance. She is the co-editor of the first Māori psychology textbook Te Manu Kai i te Mātauranga, Indigenous Psychology in Aotearoa. She is a recipient of the Royal Society, New Zealand, Apārangi Te Puāwaitanga Research Excellence Award for her distinctive contribution to psychology.

Session 1: 11:00 – 12:35

K315 Education 1	K316 Education 2	K215 Health	K209 Business	K208 Built Environment	K207 Creative
Session Chair: Selena Chan	Session Chair: Rachel Dibble	Session Chair: Phil Handcock	Session Chair: Imran Ishrat	Session Chair: Adam Khan	Session Chair: Bruce Russell
Machine Learning Rules Interpretability: Critical Perspectives for Postgraduate IT Students John G Mumford (SIT)	Education experiences of Māori Veterinarians and Veterinary Nurses in Aotearoa Francesca N Brown (OP) Jane Jones (OP)	Transforming Athletes: Supporting Educational Achievement Alongside Athletic Pursuits Rachel E van Gorp (OP) Glenys R Ker (OP) John Gualter (OP)	Dancing in the Eye of the Tiger: Fictomorphosis in Professional Practice Dave Guruge (OP) Samuel Mann (OP) Ruth Myers (OP)	BIM Data and Sustainable Building Digital Twin Framework: Preserving the Past, Managing the Present and Predicting the Future Mazharuddin Syed Ahmed (Ara)	Nutri-islands: Video Game for Nutrition Education Claudia Leong (Ara) Veronica Liesaputra (University of Otago)
Raging with the Machine: Collaborating with AI in Learning Robert Nelson (OP) Samuel Mann (OP) Ruth Myers (OP)	Exploring the Impact of Imposter Phenomenon Among Kaimahi and Identifying Support Opportunities at Otago Polytechnic Sherie Bell (OP)	The Effect of Swim Cap Shape on Aerodynamic Drag Peter Olsen (Ara) Lindsey Alton (Ara) Helen C Marshall (Ara) Ashleigh Macdonald (Cotswold Mātāhae) Nay Lin Oo (Ara) Anna Simcic (HPSNZ) Graeme R Harris (Ara)	Impact of Sustainable Business Practices in the Tourism Industry: A Study of Hotel Sector Olufemi M Omisakin (OP, Auckland International Campus) Oluyinka Margaret Omisakin (Marsden Technical Institute) Indrapriya Kularatne (OP)	Balancing Sustainability with Growth: Weaving Circular Economy Practices and Traditional Indigenous Knowledge in Aotearoa New Zealand's Residential Construction Sector Irene Boles (Ara) Sundeeep C Daggubati (Ara)	What's Next? Learnings and Reflections from the Design Industry Panel Speaker Series Machiko Niimi (OP) Tim Armstrong (OP) Angus Lewry (OP) Alex Gilks (OP) Matt Sutton (OP) Andrew Wallace (OP)
AI-Safe: An Assessment Design Tool for the Safe Use and Against the Misuse	Wairua The Beautiful Weaver: Incorporating Wairua into Tertiary Education	Exploring the Impact of App-Based Instruction, Group Exercise Class on the Future Role of Group	Crafting Memorable Journeys: The Role of Storytelling in Cultivating	Sustainable Water Management Using Crushed Glass and Mussel	From Concept to Completion: Collaborative Combining of Animation Mediums and Skills

of Generative Artificial Intelligence Bruno P Balducci (OP AIC)	Katrina Le Cong (OP)	Fitness Instructors and Personal Trainers Codi A Ramsey (OP) Adain Summerfield (OP)	Soft Skills Competence within Tourism Helen Geytenbeek (OP))	Shell Mixtures for Urban and Rural Applications Mohammad Ramezaniapour (Ara)	Ruby Meades (SIT) Christopher Popham (SIT)
		The Role of Intrinsic Motivation to Take Part in Ki-o-Rahi Patrick Boudreau (Ara) Heperi Harris (Sport NZ) Tyson Huia (Ara) Helen C Marshall (Ara) Peter Olsen (Ara)		Carbon Frontiers: Teaching the Unknown Leana Scheffer (OP) Tobias Danielmeier (OP) Blair D Isbister (OP)	

Autonomous Learning Community of Practice Meeting: 11:00

K213a, Level 2, K Block

Lunch & Poster Session: 12:35 – 1:30

Level 2 Atrium & K213a, Kahukura (K Block)

Wool Dynamics Tim Armstrong (OP) Angus Lewry (OP)	The Impact of the COVID-19 Pandemic on New Zealand Listed Companies' Dividend Policy Rajesh Adhikari (OP, Auckland International Campus) Bing Dai (OP, Auckland International Campus) Jishuo Sun (OP, Auckland International Campus) Indrapriya Kularatne (OP, Auckland International Campus)
Visual Literacy and Transformative Learning Ana DL Terry (OP) Amy Benians (OP)	A Short Overview on Perception and Characterisation of Sound in the Learning Space Dian Muñoz (Ara)

Session 2: 1:30 – 3:05					
K315 Education 1	K316 Education 2	K215 Health	K209 Business	K208 Built Environment	K207 Creative
Session Chair: Martin Andrew	Session Chair: Scott Klenner	Session Chair: Tracy Kirkbride	Session Chair: Juan Pelligrino	Session Chair: Tobias Danielmeier	Session Chair: Bruce Russell
AI in Vocational Education: Pedagogical Support vs Academic Literacies Selena Chan (Ara)	Complexities of Being Māori Michelle Te Koeti (Capable NZ)	Addiction Support Work and Job Satisfaction: An Examination of Intrinsic and Extrinsic Factors William v Jenkins (UCOL)	Development of Cold Chain Logistics of Dairy Products in Nanjing Using Analytical Hierarchy Process Haibao Yu (Windcave Ltd) Nihal Jayamaha (Massey University) Imran Ishrat (Ara)	Planting and Nurturing Transformation: A Living Campus 15-Year Retrospective Samuel Mann (OP) Kim Thomas (OP) Lisa Burton (OP) Lisa Short (OP)	Manaakitaka Reka Chloe Humphreys (OP) Adrian Woodhouse (OP) Tim Lynch (OP)
Reflection on Using Generative AI in Tertiary Education: The Case of a Project Management and Marketing Course Marie-Louise Barry (Ara) Gus Walkden (Ara)	Place and Time: A Journey of Transformation, Growth and Pātiki Lucky Hawkins (Te Wānanga o Aotearoa) Samuel Mann (OP) Ruth Myers (OP)	Funding Local Food System Development: The Problems of a Market-Driven Funding Approach Anna C Palliser (SIT)	Embracing a Comprehensive Skillset in Vocational Education: A Curriculum Redesign for Culinary Arts Adrian Woodhouse (OP) David J Gillespie (OP)	A Pilot Study on Stakeholder Perspectives: Integrating Mātauranga Māori in Architectural Education Bernadette Muir (Ara)	Girl and the Imagination Warehouse: The Exploration of Adult Issues through the Lens of Children's Media Traci Meek-Reid (SIT)
Teachers' Perceptions on the Validity, Reliability, and Fairness of Assessed Tutorial as an Assessment Method: Addressing AI-related Challenges in Designing Assessments Michelle Simbulan (EIT) Jaikaran Narula (EIT) Nick Cordery (EIT)	Not Without Consequence. Tangata Whenua Tiriti Educators in Tertiary Learning Spaces Rachel K Dibble (OP)	Leadership Within the Emergency Department Nurse Practitioner Role Rebecca J Majendie (Ara)	Unveiling Otautahi's Ethnic Food Preferences Deb Chakraborty (Ara) H. M. R. S. S Gunawardana (Ara) Kathryn Fortescue (Ara)	Architectural History: Alternative Futures Sarah McCallum (OP)	Thinking with Care Through Collaborative Creative Practice Ruth S Myers (OP) Carleen Mitchell (OP)

Can AI assist us to Address Cognitive Load for Neurodivergent Online Learners? Starting Our Journey Vanessa Scholes (Open Polytechnic) Rachel E van Gorp (OP) Jessica Tupou (Victoria University) Grayson Orr (OP)	Reflections on What is Aotearoa / New Zealand Culture John G OSullivan (Ara) Heperi Harris (Canterbury Sport)	Evaluation of a Marae-Based Pulmonary Rehabilitation Programme: A Decolonising Approach to Research with Māori Helen C Marshall (Ara) Dominic J Chilvers (Ara) Neave Wyber-Bell (Ara) Heperi Harris (Sport NZ)	The Transformative Potential of Refugee-with-Refugee (RwR) Value Co-Creation During Resettlement Ilayaraja Subramanian (Ara) Jörg Finsterwalder (UC) Michael Hall (UC)	Body-Logic: Embodied Experience Through Embodied Design Leana Scheffer (OP)	Technology and Craftsmanship Chris K Fersterer (OP)
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Emerging and Early Career Researchers Community of Practice Meeting: 13:30

K213a, Level 2, K Block

Afternoon Tea: 15:05 – 15:25

Level 2 Atrium, Kahukura (K Block)

Session 3: 15:25 – 17:00

K315 Education 1	K316 Education 2	K215 Health	K209 Business	K208 Built Environment	K207 Creative
Session Chair: Allen Hill	Session Chair: Adrian Woodhouse	Session Chair: Patrick Boudreau-Alguire	Session Chair: Rachel van Gorp	Session Chair: Sundeep Daggubati	Session Chair: Sunita Gautam

Advancing Pedagogical Strategies in Chinese Transnational Education: Lessons for Te Waipounamu Jeremy Taylor (OP)	Early Career Teachers' Journey Towards Excellence Elizabeth Martin (OP) Claire Goode (OP) Yvonne A Thomas (OP)	Navigating the Fog; Studying while Concussed Phil J Handcock (OP) Gary Barclay (OP) Laura J Munro (OP) Helen McDermott (OP) Jenna Collie (OP) Amy Simons (OP)	Challenges and Opportunities Faced by HR Professionals in Aotearoa, New Zealand and Strategies for their Effective Management Hufsa Kazmi (Ara)	Micro-Credentials for Prefabricated Construction Rehan Masood (OP)	The role of Visual Within Professional Practice Inquiry (30-minute presentation) Ruth Myers (OP) Samuel Mann (OP) Steve Henry (OP)
Exploring Vocational Education and Training's Role in Just Transitions: A Practice-Based Approach to Researching VET Through a Case Study of Apiculture Education and Training in Aotearoa New Zealand John P. Howse (Toi-Ohomai / University of Waikato)	Teachers Plant Seeds that Grow Forever Kerstin I Dofs (Ara)	Making Time to do Collaborative Research as a Working Team (and Enjoying It) Andrew Frost (Ara) Kath Harrison (Ara) Dominic J Chilvers (Ara) Jimi McKay (Ara) Amy Allen (Ara) Adele Parkinson (Ara)	Voting Rights in Equity Crowdfunding James Murray (Ara) Jane Parker (Ara)	Impact of NZS3910:2023 Changes on Construction Practices Rehan Masood (OP) David A Finnie (OP) James Flanders (OP)	
Planning a Practice-Focused Inquiry in Universal Design for Learning Utilisation: Questions we Asked Ourselves Rachel M Mcnamara (OP) Amy Benians (OP) Helen C Mataiti (OP)	Like and Subscribe and Learn: Podcasts in Learning Tim Lynch (OP) Lucky Hawkins (Te Wānanga o Aotearoa) Jules Tautz (OP) Finn Boyle (OP) Samuel Mann (OP) Mawera Karetai (University of Otago)	The Use of Jigsaws in Tertiary Education Johanna I Rhodes (Nursing Council of New Zealand) Mary J McMillan (OP)	An Exploration of the Marketing Academic / Practitioner Disconnect in Australasia Linda McKitterick (Ara) Paula Arbouw (Lincoln University)	Embedding Ethics in the Workplace - Aotearoa Construction Trades David M Bettis (OP)	
AI for Higher Education – Trends, Future, Challenges and Opportunities Neeru Choudhary (Open Polytechnic) Muhammad Arslan (Open Polytechnic)		Belonging as a Protective Factor Adrienne P Buckingham (OP)	Early-Stage Company Valuation in New Zealand's Equity Crowdfunding Market James Murray (Ara)		

ITP Research Symposium Day 5, Friday December 6

OPSITARA Symposium, Madras St Campus, Ara Institute of Canterbury

Second Keynote: 8:30 – 9:15: Dr Mazharuddin Syed Ahmed

D Lecture Theatre & streamed

Empowering Through Education: Meaningful Refugee Participation in New Zealand Society

This keynote explores the critical dimensions of meaningful refugee participation in New Zealand society, examining four key pillars: education, economy, health, and self-independence. Drawing from real-world experiences and research, the session delves into how these interconnected elements contribute to successful refugee integration and empowerment. The presentation addresses fundamental questions about the nature and significance of meaningful participation, particularly focusing on refugees' experiences within Aotearoa. Through examining both barriers and enablers to participation, the discussion will highlight practical strategies for enhancing refugee engagement in various aspects of society. Key focus areas include:

- Understanding diverse perspectives on meaningful participation
- Identifying systemic barriers and practical challenges
- Exploring successful enablers and support mechanisms
- Developing strategies for enhanced integration

The session aims to stimulate thoughtful discussion about how organizations and communities can better support refugee participation across multiple domains of life, leading to more effective and inclusive integration practices.

Dr Mazharuddin Syed Ahmed is an experienced and passionate academician and technology evangelist with a demonstrated history of teaching Building Information Modelling (BIM), Circular Economy and Carbon Footprint Assessment. He is a Building Performance Data Scientist, Architectural Engineering Program Development and e-Learning Content Design Consultant. He is also an active member of the Christchurch Call (to eliminate terrorist and violent extremist content online) and a board member of the Christchurch March 15 Terrorist Attack Collective Impact Board New Zealand. A passionate public speaker on spreading the awareness of the dangers of hate, prejudice, and propaganda-driven fake news, Mazharuddin has developed a Level 5 course that deals with countering hate speech based on human rights education and narratives.

Applied Business Research Community of Practice Meeting: 09:20

K213a, Level 2, K Block

Session 4: 9:20 – 10:20

K315 Education 1	K316 Education 2	K215 Health	K209 Business	K208 Built Environment	K207 Creative
Session Chair: Allen Hill	Session Chair: Joanna Cobley	Session Chair: Anna Scott	Session Chair: Imran Ishrat	Session Chair: Matt Ramezani Pour	Session Chair: Bruce Russell
Hiapo Framework - Weaving Professional Identity in IT Jamie Vaughan (Port Otago) Samuel Mann (OP) Henk Roodt (OP)	How do Practice Doctoral Journeys Bring About Learner Transformation? Martin B Andrew (OP) Jeremy Taylor (OP) Steve Henry (OP)	Novel Implementation of LULU Filter: Project Progress Thomas F Cronje (Ara) Yao Li (Ara)	Business Students' Perception of Reflective Practice Rachel Byars (OP)	How Aeronautical Engineering Tutors Manage their Emotions at Work Judith McFarland-Hill (OP)	Is This a Photograph? Wendy A Clarke (Ara)
Winning, Doing, Finishing: An Account of Externally Funded Research, with Some Pointers for Colleagues Cath J Fraser (Toi Ohomai) Judith A Honeyfield (Toi Ohomai)	Learning to be Reflexive in Research Leigh Quadling-Miernik (Yoohee Colleges)	Product Design for Health - Stoma Shield Andrew Wallace (OP)	Stepping Through the Portal: Envisioning a Collaboratively Holistic Integrated Project for Tomorrow Robert Nelson (OP) Ruth Myers (OP) Samuel Mann (OP)	Engineering Ākonga (Student) Perceptions of IEA Graduate Attributes Adam A Liberatore (OP) Hilary Lawrence (OP) Matt Slattery-Holmes (OP) Joelle S Peters (OP)	365 Days Looking Down Deborah B Marshall (Ara)
Looking at Teaching Practise to Develop a New High Interest Course Graeme R Harris (Ara)	Making Excellence Authentic: Kōrero with Doctoral Mentors Martin B Andrew (OP)	Organisational Cynicism and Turnover Intention: Moderating Role of Employee Engagement and Organisational Support Muhammad Arslan (Open Polytechnic) Neeru Choudhary (Open Polytechnic)	Reflection on Using Generative AI to Guide Students Through the Level 7 Industry Project in Business Gus Walkden (Ara) Marie-Louise Barry (Ara)		Kari i te Tuara: 3D Game Work in Progress Rachel Mann (SIT)

Morning Tea & Poster Session: 10:20 – 11:00

Level 2 Atrium & K213a, Kahukura (K Block)

GC Analysis of the Fatty Acid Composition of Plant-Based Milks in Aotearoa Mary L Fitzpatrick (Ara)	High-Intensity Interval Training: Effects on Aerobic and Anaerobic Performance in Waka Ama Jewell Carlson (Sport Hawke's Bay) Patrick Lander (EIT)
The Effect of Swim Cap Surface on Aerodynamic Drag Peter Olsen (Ara) Nay Lin Oo (Ara) Helen C Marshall (Ara) Graeme R Harris (Ara) Lindsey Alton (Ara)	Project Based Learning in Action: The 'Waka Whetū' Matariki Exhibition Denise Narciso (OP) Taryn Ormsby (OP)

Session 5: 11:00 – 12:10

K315 Education 1	K316 Education 2	K215 Health	K209 Business	K208 Built Environment	K207 Creative
Session Chair: Jo Drysdall	Session Chair: Peter Olsen	Session Chair: Suzy Hodgson	Session Chair: James Murray	Session Chair: Dian Muñoz	Session Chair: Rachel Dibble
Māui te Pūkenga: The Evolution of the Expert Kaiako Faye Wilson-Hill (Ara) Niki Hannan (Ara) Hemi Hoskins (Te Wānanga o Aotearoa) Hēperi Harris (Hawaiki Hou, Ihi Aotearoa, Sport NZ)	Evaluative Questions for Necessarily Insider Professional Practice Samuel Mann (OP) Ruth Myers (OP) Robert Nelson (OP) Lucky Hawkins Dave Guruge (OP)	The Student Nurse's Experience of Telehealth as a clinical placement in the BN programme Dianne G Hudson (Ara) Trish Thomson (Ara) Rachel Burt (Ara) Nic McLeod (Ara)	Carbon Cutting: Everyone Wants to Save the World... No One Wants to do the Dishes Tim Lynch (OP)	Advancing Interdisciplinary Learning in Construction Management Education: Insights from Student and Academic Perspectives Sundeeep C Daggubati (Ara) Irene Boles (Ara)	Collaborative Poetry for Empathy and Reflection Kerry B Davis (OP)
It's About Time for Sustainability Allen Hill (Ara) Kerry Mulligan (Ara) Reimana Tutengaehe (Ara) Adam Brasell (Ara) Georgie Archibald (Ara)	Layered Drivers Framework Samuel Mann (OP) Ruth Myers (OP) Dave Guruge (OP) Jamie Vaughan (OP) Mawera Karetai (University of Otago)	Failing to Feedback – In the First Instance: The Development of an Escalation Pathway for Aged Care Mentors for Bachelor of Nursing Students	Integrating Industry Insights for Enhanced Project Management Education: A Longitudinal Study at Ara Marie-Louise Barry (Ara)	Te Puna Wānaka: A Living Lab of Architectural Intelligence Adam Khan (Ara)	Modern Works for Jazz and Contemporary Brass Cameron J Pearce (Ara)

Lena Mkwara (Ara)		Stacey M Porter (SIT)			
Confronting Sustainability: “Drops in the Ocean Still Matter” Lena Mkwara (Ara) Rea Daellenbach (Ara)	Genre Prompts as Reflective Tools in Professional Practice Samuel Mann (OP) Dave Guruge (OP) Ruth Myers (OP) Kylie Wright (OP)	Our First Mothers: Finding Space for Mātauranga in Midwifery Undergraduate Education Jacqueline Martin (Ara)	Understanding Dominant Entrepreneurial Theories’ Presence in the Real World Sunita Gautam (Ara) Michaela Balzarova (University of Canterbury) Herb de Vries (University of Canterbury)		

Conference Close and Farewell: 12:10 – 12:30

Level 2 Atrium, Kahukura (K Block)

Unitec-MIT Symposium

December 2-3



Pacific research: Who speaks and who hears?

Peggy Fairbairn-Dunlop

Tagaloatele Peggy Fairbairn-Dunlop is Sa Teo, Sa Petaia and Sa Atoa. Her title is from Lauili. Tagaloatele's parents Emele-Moa Te'o and James Fairbairn migrated with their five children to Wellington in the 1940s, where Tagaloatele and her sister were born. Tagaloatele's career comprises a many levelled mix of teaching and research, national planning and policy making and, 'recording our stories before these are lost.' She completed a Dip Teaching at Wellington Teachers' College (WTC) and with her husband Jim taught at Maori designated and Porirua primary schools before returning to WTC as Lecturer in Education. In 1980 they moved to Samoa with their five daughters when Jim was appointed Head of English at Avele College. That year, Tagaloatele wrote up her VUW Masters (Samoa parents' perceptions of primary schooling in New Zealand) and then taught at the Samoa Secondary Teachers' College followed by 15 years at the USP School of Agriculture (Alafua) specialising in agriculture education and extension, farming systems and gender and youth equity issues. She completed a Ph D at Macquarie University (E au le Inailau a Tamaitai: Samoan Women and Development) and on her return to Samoa held several UN regional posts, including Sustainable Human Development Adviser (UNDP), Pacific UNIFEM and, Social Sciences Adviser (UNESCO). Tagaloatele returned to New Zealand in 2006 to be Inaugural Director of VUW's Va'aomanū Pasifika before moving to AUT as Professor of Pacific Studies. Presently she is a member of the Te Pūkenga Council, volunteers at the Sally Shop, supervises a doctoral student and, 'has time to write.'

Examining factors influencing the use and adoption of digital health technologies among older consumers: Are we providing our older population with what they want?

Abi AM Mosbah (MIT)*

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Digital health are becoming increasingly popular and has proven effective in optimising health outcomes, improving access to healthcare services, reducing hospitalisations, and enabling healthcare professionals to share information across different disciplines. However, the extent to which older adults (50+) utilise digital health technologies to their fullest potential is still uncertain. Objective: This research examines factors influencing the use and acceptance of various digital health tools among older generations to improve their health outcomes. Methods: A qualitative analysis of existing literature published between 2018 and 2023 was conducted and analysed using qualitative research methods. Results: The usability and adoption of digital health tools by older adults are influenced by various factors, which can be categorised into three factors: (1) person-related factors, (2) technology-related factors, and (3) context-related factors. These factors are represented in the dominant theoretical frameworks: The Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT/UTAUT2). Although these theoretical models are considered adequate, they lack comprehensiveness. This research incorporates additional concepts and variables to extend the understanding of what impacts older adults' acceptance and resistance to technology. Conclusions: Current technology acceptance models have been useful in simplifying the factors contributing to older adults' use and adoption of digital health tools. However, these models omit some critical factors that influence older adults' experiences, such as individual differences in self-efficacy, technology anxiety, and trust in technology and health systems. Findings in the research suggest that various contexts should be explored to determine the factors influencing older adults' acceptance or resistance to technology use. Further studies should address the digital divide among older adults, including those from diverse socioeconomic and cultural backgrounds. Additionally, more longitudinal research is needed to understand the long-term factors influencing the use and adoption of digital health tools among older adults.

Assessment of Superconductor Efficiency in Practical Electric Motor Applications

Alireza Gheitasi (MIT)*

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Superconductors offer higher efficiency than conventional motors due to the absence of electrical resistance. This paper evaluates the viability of using superconductors in electric motors, considering the impact of cryogenic systems required to maintain superconductivity. Improving efficiency can be achieved through various approaches, such as utilizing superconductor materials in the rotor, conductors, or other components. The resulting efficiency gains need to be evaluated in real-world contexts to determine whether these motors are suitable for industrial applications.

Integrating Photovoltaic and Wind Power into New Zealand's Renewable Energy Ecosystem

Alireza Gheitasi (MIT)*

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As New Zealand works toward its goal of 100% renewable energy by 2050, the integration of photovoltaic (PV) and wind power is essential. While the country currently generates over 80% of its electricity from renewable sources, primarily hydropower and geothermal, the intermittent nature of PV and wind power introduces challenges for grid stability and energy reliability.

This presentation examines the role of PV and wind in New Zealand's energy ecosystem and evaluates strategies to manage their variability. A key focus is the potential use of large scale energy storage technologies including Pumped Hydroelectric Power (PUPP) as a solution. PUPP can store surplus energy generated during periods of high PV and wind output and release it during times of low generation or peak demand. The necessity of PUPP is assessed in light of New Zealand's current energy mix, future renewable capacity projections, and environmental considerations. While PUPP offers benefits in terms of grid stability, alternative solutions—such as decentralized energy storage and advanced demand-side management—may also provide effective ways to integrate PV and wind power without the large-scale infrastructure investment required by PUPP.

The study suggests that a combination of energy storage solutions, including PUPP and smaller, decentralized systems, along with demand response strategies, may be the most sustainable approach to integrating PV and wind into New Zealand's renewable energy future.

Students Perspective on Use of ChatGPT in Civil Engineering Education-Phase 1

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The space around artificial intelligence (AI) tools/models that have been developed is continuously changing. Especially, the emergence of new AI tool i.e. ChatGPT (Chat Generative Pre-Trained Transformer). Tertiary institutions in New Zealand such as Unitec has a student-centred approach to teaching and learning. The current code of practice regarding academic integrity at Unitec needed to be reviewed. Therefore, this study was initiated with a focus to understand students' perspective on the use of ChatGPT in Civil Engineering discipline at Unitec. This is a very early stage of this project. The specific objectives were to collect and analyse the information regarding (i) students' ability to use ChatGPT, (ii) how much AI literacy do they (students) have, (iii) challenges that are being faced by students when it comes to understanding key aspects of Civil Engineering courses(es), (iv) limitations of ChatGPT, etc., and (vi) to develop clear guidelines to incorporate the use of ChatGPT in our teaching and learning environment. The findings of this project would help us to develop clear guidelines for the use of ChatGPT for a course or a set of courses for Civil Engineering students at Unitec. Some of the key research questions were: (i) how many students are familiar with ChatGPT capabilities (ii) how many students have used Chat GPT or any other AI tool for academic purpose before, and (iii) how many students have used Chat GPT for Civil engineering related tasks or assignments, (iv) effectiveness of ChatGPT in terms of aiding understanding of key aspects of a course (v) limitations of ChatGPT in terms of finding answers for specific topics/problems within a course, etc. A questionnaire was created and distributed among the Civil Engineering students in one of the selected courses. The selected course was water and wastewater treatment (WWT), which has a good mix of learning outcomes for theory, standards, and design calculations. The data analysis is in progress. However, the study results showed that there is a good mix of students who are familiar with the capability of ChatGPT. There are students who have used ChatGPT weekly/biweekly basis. The results showed that the specific topics sought (in the selected course) using ChatGPT were the definitions of key parameters, waste management, treatment processes, calculations, nitrogen cycle, etc. 22% BEngTech and 37.5% NZDE students thinks that ChatGPT was less effective in terms of understanding of WWT processes. The students feedback showed that ChatGPT was less effective for the key topics such water and wastewater standards/specific values of New Zealand, design calculations and providing incorrect calculations/answers for course specific topics. This study also discusses some of the ethical aspects of using ChatGPT in academic settings, which may be useful to develop clear AI guidelines for the department and/or institution.

Comparative Study on Cultural Dimensions of Organisational Change in India and New Zealand IT Industry

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The information technology sector has been experiencing exponential growth globally. India and New Zealand share similar strategic focuses on advancing their information technology sector. India is a global Information Technology leader and a highly sought-after destination for business outsourcing. New Zealand has also demonstrated strong growth in the invention of new technologies and technology exports over the last two decades. Against this backdrop, transformational changes, especially technology-oriented changes, have been more frequent than ever in organisations. Cultural factors are presumed to be one critical influential force in facilitating or hindering organisational changes. In particular, Hofstede assessed India and New Zealand as two widely different cultures in his 2001 study.

This study aims to examine the relationship between organisational change and culture in the Information Technology sector of India and New Zealand. The research objectives are to analyse these aspects in both nations and compare cultural dimensions and organisational change while identifying critical factors for cross-collaboration.

The research follows a post-positivist paradigm using a quantitative approach. A survey was developed to collect information from IT professionals in either or both countries. Given the specific criteria for respondents, purposive and snowball sampling methods were deemed the most suitable for this study. Data analysis tests the differences between the change and cultural factors across three stages: before, during, and after.

The results show that cultural gaps are narrowing over time. However, this study highlights critical driving and restraining forces to change and explores significant cultural differences between the two nations. Additionally, it identifies cross-cultural factors relevant to different stages of change. This study implies the importance of some identified cross-cultural factors, suggesting that both countries can adopt certain practices from each other. By doing so, they can implement change more effectively while positively managing cultural aspects within organisations.

The Architecture of W.H. Gummer

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Born in Auckland in 1884, William Henry Gummer is regarded in the top echelon of New Zealand architects by many of the leading lights of New Zealand architectural history. Gummer was the lead designer of many of New Zealand's notable buildings including the Guardian Trust Building (1913–17), and the Dilworth Building (1926) on Queen Street, Auckland; The Winter Gardens in the Auckland Domain (1916–1928), and the Remuera Library (1926) and the Auckland Railway Station (1928), both recipients of the N.Z.I.A. Gold Medal. He also designed the New Zealand War Memorial Carillion (1932) and Dominion Museum (1936) in Wellington. He contributed significantly to the architectural discourse in New Zealand in the 1920s and 1930s writing primarily about architectural design and education in New Zealand.

Despite all this, William Gummer remains strikingly under-researched in New Zealand architectural historiography. Aside from mentions in New Zealand architectural history surveys, the only credible scholarly work has been an exhibition of his firm Gummer and Ford's work in 2006 at The University of Auckland's Gus Fisher Gallery, a master's thesis on Gummer and Ford by Bruce Petry published in 1992, and a book on four of Gummer's houses in Hawkes Bay by Paul Waite in 2005.

The aim of the study is to illuminate the work of William Gummer through a comprehensive architectural analysis of his buildings from the point of view of the client, the site and by examining the architectural principles employed by William Gummer, learned during his time at London's Royal Academy of Art, from his time working under Edwin Lutyens and Daniel Burnham, and made clear by his own writing, and the design books he recommended to students and other professionals.

This study is hoped to fill the gap in New Zealand architectural historiography.

Constructing Gender Identities on Social Media: A Study of Young Adults in Aotearoa New Zealand

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As social media use continues to rise, it becomes essential to explore the processes of identity creation and expression in digital spaces. This talk will specifically explore how young adults (aged 18-25) in Aotearoa New Zealand perform their gender identities on Facebook. The presentation will cover the findings of a study that employed a two-phase methodology to examine four main aspects of online gender differences: usage frequency and motives; language use; visual self-presentation; and perceived privacy and self-disclosure. The first research phase comprised 10 focus groups with 39 participants, prioritising young adults' personal narratives. In the second phase, a multimodal critical discourse analysis (MCDA) was utilised to explore 160 public Facebook profiles of young adult users living in New Zealand. The findings suggest that normative gender performativity is prevalent, although some research subjects exhibited non-stereotypical forms of self-presentation. While gender-related differences were observed, they were often less pronounced than what earlier studies had anticipated. Stereotypical self-portrayals were most evident in photos, with both research phases revealing that many users had a likelihood to replicate traditional gender roles in images. The findings also highlight an empowering potential of Facebook for gender and sexuality diverse users, such as facilitating coming out, finding support, or socialising. This study makes several significant contributions to the body of scholarship. Primarily, it is the first to examine gender performativity on social media within the Aotearoa context. It also integrates the experiences of gender and sexuality diverse users into the discussion on identity performance online. Additionally, the study employs triangulation, emphasising the importance of emerging adults' own voices and agency in narrating their experiences. This approach enhances the credibility, reliability, and comprehensiveness of the research.

Social Work in a Neoliberal Context: Reinforcing Inequalities or Catalyzing Change?

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The research aims to explore the tension between welfare state-driven exclusion and individuals' desire for societal belonging, particularly among those affected by poverty in Germany. Using a qualitative methodology based on interviews with individuals experiencing poverty, the study investigates how social work both reinforces the status quo and creates opportunities for transformative change.

The findings reveal that while social work often upholds existing inequalities, it also has the potential to challenge and address these disparities. The study evaluates whether social work's mission of promoting social justice and inclusion can be achieved within its current framework. Results indicate that social work can serve both as a support for the system and as a catalyst for change.

The research concludes that a reorientation of social work is necessary to facilitate structural transformations, placing social justice at the core of its practice. Without such a shift, the field may continue to stabilize inequalities rather than contribute to their resolution.

Incorporating the Five Values of Te Noho Kotahitanga in Peer Review

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Student feedback within the School of Applied Business (SAB) undergraduate programmes at Unitec concurs with international literature that students hold negative opinions of teamwork and the peer grading of team project assessments.

An opportunity to develop a new peer review tool in-house at SAB led to a decision to base the tool on Te Noho Kotahitanga (TNK), Unitec's core institutional values. This reinforces Unitec values by relating them to working effectively in teams, embedding TNK's Māori values into our courses and creates our own unique, contemporary approach to peer review. The result was an online survey and a rubric with capability to download, analyse and generate individual reports for grading purposes and verbatim feedback. Peer feedback and well-designed rubrics, as well as utilising peer review tools in a formative and summative capacity, create the opportunity for personal development and improvement of team skills.

Throughout the process we became aware of the lack of research on the inclusion of indigenous values in peer review. An extensive international and Aotearoa New Zealand literature review indicated a lack of similar, direct applications of Māori and other indigenous values in peer review. Wang et al. (2023) argues that peer review should be more deliberately included in teaching design, hence our intentional use of TNK's Māori values in our peer review tool.

Our reflection of the process and the lack of literature supported the need to share our experience through a qualitative case study. We situate this leading-edge innovation within the framework of Academic Communities of Engagement (ACE).

Enhancing Salivary Secretion in Sleep Apnea Patients Undergoing CPAP Therapy: A Novel Approach with Oscillation Therapy

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Continuous positive airway pressure (CPAP) therapy is the standard treatment for obstructive sleep apnea (OSA), commonly supplemented by humidifiers to alleviate dryness and enhance patient comfort. This clinical trial investigates the use of a novel therapeutic technique that combines CPAP therapy with oscillation therapy, aiming to improve salivary secretion without the use of a humidifier. Conducted at Fisher & Paykel Healthcare, the study involved 15 adult participants diagnosed with OSA, all of whom were non-smokers and had no recent caffeine intake. Ethical approval was obtained, and informed consent was secured from all participants. Salivary samples were collected both before and after CPAP therapy on two separate nights: one with standard CPAP treatment and one with CPAP combined with oscillation therapy. Results demonstrated a significant improvement in salivary secretion following the oscillation therapy, offering a potential solution to enhance comfort and adherence to CPAP treatment without the need for a humidifier. These findings suggest a promising alternative to conventional CPAP therapy, particularly for adults experiencing discomfort due to dry mouth. Further research is recommended to explore the broader implications of this combined therapy in diverse patient populations.

Te Atatu Peninsula Residential Development Civil Engineering Infrastructure Design

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This research, assessment and engineering design addresses the requirements for infrastructure related to the proposed development at Graham Avenue, Te Atatu Peninsula, Auckland: including the provision of a common accessway, stormwater, wastewater, potable water supply. Research has been undertaken on the latest Hydraloop water saving technology for grey water, which can be utilised on the new dwellings, and will be installed as part of the development so that water can be re-used and reduce the use of the public water supply. This provides a more sustainable development (i.e. lowers the Watercare demand for potable water supply), and cost savings for the future owners of the properties as water continues to increase in price.

The proposed stormwater infrastructure will service the subject site with a significant public extension required along Graham Avenue. The proposed wastewater drainage network will discharge directly to an existing public wastewater manhole on the site. Potable water supply will be provided by connection to the existing reticulation within the road berm. Capacity assessments have been undertaken on both the stormwater and wastewater networks. The assessment has shown that stormwater mitigation with detention tanks is required of the peak flow to prevent downstream flooding.

The assessment and design have shown that the proposed development can be serviced with new and existing infrastructure within close vicinity of the site, and the development will have no more than minor effects on existing public reticulation and the environment.

A Comparison of Rural and Urban Microcredit Group Behaviour and Performance

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Do rural microcredit groups outperform urban groups and, if so, why? Both microcredit groups and work place teams consist of members who work interdependently on a specific, common goal in order to achieve a desired result for their businesses. In microcredit groups in the developing world, the common goal is access to micro-loans that can support family subsistence and the survival and growth of microbusinesses. Some literature suggests that peer-group and community pressure will be greater in rural areas and will lead to higher group repayment rates. In addition, higher levels of social capital in rural areas, such as group and community solidarity, could also increase repayment rates. This study makes a comparison of social sanctions, harmonious social relations, loan repayments and financial capital formation in rural and urban microcredit groups that operate in various states in central Mexico. Social categorisation theory is utilised to explain how the more homogeneous rural groups will obtain superior outcomes. A structural equation model and t-tests analyse the above constructs by means of a survey collected from micro-entrepreneurs in 182 distinct solidarity groups. Rural groups are found to have higher levels of harmonious social relations. Consequently, group loan repayments and the financial capital formation of individual micro-entrepreneurs are also significantly higher in these areas. Surprisingly, however, social sanctions are not found to improve loan repayments in either rural or urban environments. These findings agree with assumptions that greater social cohesiveness in rural areas leads to higher repayment rates in these areas. However, the results of this study disagree with assumptions that higher peer-group and community pressure in rural areas also lead to higher repayment rates.

Training future social workers: Learning beyond the classroom

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This presentation is grounded on the research project initiated by the Manukau Institute of Technology School of Social Work. The project explores innovative methods of nurturing social work students. The presentation posits that social work education must aim to meet professional standards both in teaching and learning. It fulfills the Social Work Registration Board (SWRB) expectations for social work education in Aotearoa, New Zealand. The research project addresses two questions: 1) what types of learning can effectively nurture students during their social work degree programme? 2) how can communities and students support each other to maximize students' potential? The social learning theory by Bandura was a theoretical construct that guides the research. This theory aligns with the community of learning because students learn through social interaction. This qualitative research project used an open-ended questionnaire as a data collection method from participating social work students. At least 40 responses are expected to be able to provide enough data for analysis, but we are open to more if possible. The teaching team encourages the students to develop and engage in various activities, clubs, associations, and events within MIT and their community. This process helps students unfold and redefine their identity, including their cultural identity. This promotes a sense of belongingness and students feel supported and nurtured as they explore new learning opportunities and face challenges beyond the classroom. The data will indicate the importance and benefits of having a community of learning that students learn outside of the classroom for social work and other helping professions. The outcomes of this research aim to create awareness about the implications of a community of learning and inventing different approaches towards supporting learning across disciplines.

Transformative effects of AI on tertiary education

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The purpose of this study is to explore factors influencing the use of Artificial Intelligence (AI) tools and their transformative effects on tertiary education in New Zealand. AI tools make it easy for learners to access and use information. These tools not only gather the information students need, but they also go further to organize, analyze, and evaluate the information to suit students' needs. Now, learning appears to be about having awareness of what AI tool is available and how to use it rather than for the learner to spend time and effort to analyze concepts. This function of AI tools is impacting the way learners' process information for their knowledge, possessing a significant transformative effect on tertiary education. Academic institutions are divided in their views on how students should use AI tools for their learning. It is unclear what constitutes the ethical implications of using AI tools in tertiary education in New Zealand. While some institutions allow students to use some AI tools in their assignments, other institutions consider the use of AI tools in assessments as a serious academic integrity issue. In this presentation, we define AI tools, discuss specific types, assess regulatory standards guarding the development of AI tools, and enumerate the skills and competencies required to use AI tools in education. The study employs an interpretive qualitative approach to explore the perspectives of 28 key stakeholders from the IT industry and the education sector. It uses a case study method. A snowball technique is used to sample interviewees from 2 IT organizations responsible for developing AI tools and 8 tertiary institutions in New Zealand. This study is in progress, pending ethics approval at the November meeting of the Open Polytechnic Research Ethics Committee. The study will be replicated in South Korea and Pakistan to help tertiary education institutions in various contexts understand how AI is impacting teaching and learning and how they can reposition themselves to harness the full benefits of AI tools to improve tertiary education.

From Transdisciplinarity to Community Based Participatory Research - The Masters programme in Social Practice

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This is a narrative of the two decade journey of the research component of two Masters programmes in Unitec's Social Practice Department and the challenge to find research paradigms which address the ever increasing complexity of cultural perspectives which have to be understood in relation to a widening range of disciplines. The MSocP began in 2004 with a commitment to a transdisciplinarity model in which the boundaries of counselling, social work and community development could be diffused, and thus made accessible to wider cultural interpretations. In 2014 this 240 credit programme was disestablished and replaced by a 180 credit MAP (Social Practice) programme and became a research only programme with a Kaupapa Māori, Indigenous and decolonisation lens which made Māori culture and qualitative epistemology and axiology the dominant focus with a transdisciplinarity shift from a discipline led focus to a community empowerment focus, Decolonisation became purpose and process of Indigenous research where tino rangatiratanga, tikanga, whanaungatanga and whakapapa are principles that have to be acknowledged in research.

Pacific Island nations researchers have also developed their own models of Indigenous research methodologies (IRMs) and these had to be the engines behind Pacific research. Each had their own expressions of self determination, cultural practice, systems of relationship and connection, and of ancestry and spirituality. These methodologies acknowledged the harm of colonisation. IRMs are not a niche practice for Indigenous cultures to use in their homelands: they are a worldwide challenge to Western methodologies, particularly those based on quantitative methodologies underpinned by "objectivity", positivism and determinism.

In 2023/24 international social work, nursing, psychology, counselling, teaching, law and dental health students enrolled. The student's home countries have their own history of colonisation, decolonisation agendas and incipient IRMs. The students also have experiences of colonisation (racism, discrimination, service denial, exploitation) in migration. Migrant researchers connect Indigenous and migrant research and the methodologies they share such as Community Based Participatory Research methodology which, like IRMs, puts research in service of community. So the international students research with their community, for their community and by consent of their community.

Where projects are quantitative and the methodology of data collection sits outside the general narrative approach of IRMs, the principles of IRMs still require that the research process promotes community self determination, and in seeking approval works within the cultural practice of the community, its systems of relationship and connection, and its understanding of ancestry and spiritual connection. This is a huge transdisciplinarity shift from time when research was owned by the disciplines and culture and spirituality were unseen.

Bridging and Foundation Education: Hopeful and helpful, or challenging and a force for change

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The aim of this study was to compare the “territory” of bridging and foundation education in 2000 with our current environment. The purpose of bridging and foundation education has been described as enabling under – prepared students to access tertiary studies successfully so they may follow their career aspirations. A more recent definition might be to create change so that inequality of outcomes in the tertiary system is addressed.

In 2000, bridging and foundation education had some precursors in New Zealand and internationally, but the sector was still growing and finding its way. At this time, the discourse of the sector was notably about access, helping and a little of rescuing. There was less about structural change or about today’s popular term, disruption.

This study has been designed using mixed methods including a 2022 survey of bridging and foundation educators in comparison with a similar survey in 2000, a review of New Zealand literature in this time frame, and analysis of regulator data.

Across the 24 years that is the timeframe of this study, there is certainly evidence of some shift in the discourse of the sector, but it might best be described as polarised; there are still the helpful and hopeful statements but also evidence of the language of a more radical mindset of infiltration, value shift and leadership for change. There is evidence of a shift in equitable outcomes of the tertiary system and certainly some of this may be attributable to bridging and foundation education having differing impacts in various locations, but also the significant influence of the Kura Kaupapa, the Wānanga, a group of school to tertiary studies initiatives and others have demonstrated impact.

The Value of Digitalisation in Aotearoa New Zealand: Perspectives from Focus Group Discussions

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The preservation of heritage in New Zealand is becoming increasingly precarious due to the growing impacts of both natural and artificial disasters, leading to significant heritage loss. Many believe that climate change is a major factor exacerbating this issue. Despite the precarious state of heritage preservation, there has been minimal progress in addressing the problem, only accentuating issues surrounding heritage loss. To explore the challenges and potential solutions related to heritage loss, this research presents findings from three focus group discussions conducted as part of the ongoing project "Digitalisation of Heritage in New Zealand." The focus group comprised 16 industry, academia, community, and government professionals. They discussed the role and advantages of digitalisation in documenting and preserving heritage, the integration of digital tools, and the importance of maintaining authenticity in digital representations. The findings highlight the critical role of digitalisation in safeguarding, protecting, and celebrating heritage sites for future generations. Additionally, the results offer practical recommendations for using digital technologies to improve heritage preservation in Aotearoa, New Zealand. This paper aims to contribute to the ongoing conversation about heritage conservation in the digital era, providing insights and suggestions for enhancing the appreciation and understanding of our shared cultural heritage through digital means.

The benefits of a self-development process to learners undertaking a professional practice research degree

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The aim of this research study was to examine how a self-development process helped learners improve both their research processes and outcomes in a professional practice research degree.

A dozen learners volunteered to be interviewed over the experience they had gained from undertaking a professional practice research degree. Half the learners were supervised by the first author, who had introduced them to a personal framework of developmental practice from his PhD studies. The other half were supported by different supervisors.

In order to prevent bias, the learners were recruited independently by a third party. Then, individual interviews were undertaken by each researcher, where those who had been provided with the self-development process were only seen by the second author. The research methodology made use of an ethnographic qualitative approach, in which each learner's journey and story was recorded based on a semi-structured interview process. The data was then transcribed and written up in a narrative analysis format by the first author before final results were collated and analysed thematically by both authors.

The findings revealed three distinct groups:

- Learners who had been introduced to the framework of developmental practice were more aware of the contributions of their prior experience to the research degree and how this had helped them grow in their research and potential for a range of subsequent careers.
- Learners who had significant autonomous experience and responsibility in their prior careers were more creative with their approach and confident with their research findings and its potential in their existing careers.
- Some learners appeared not to progress as far in their personal development and self-understanding with their research study due to lack of connection with their earlier experience and its contribution to their prior success.

The significance of this work is that that better self-understanding of prior experience can significantly enhance professional practice research study and its application to subsequent career development.

Storytelling and Genealogies as a Transfer Mechanism Across the Generations

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The transfer of knowledge from one generation to the next is a fundamental aspect of human survival through the ages. Sir Isaac Newton is credited with the notion that we could reach the heaven by standing on the shoulders of giants as an expression to capture the cumulative knowledge that has resulted in the advances in technology and society that we share today. The academic arena has developed a rigorous process from the accumulation of knowledge through peer reviewed articles and journal publications. This process involves a careful examination of the contribution that each paper makes to the existing body of knowledge and acknowledging those authors who had already made a significant contribution to the topic at hand. While the process is rigorous, its academic scrutiny prevents the accumulation of knowledge at the more personal level.

This paper examines the contention that intergenerational wellbeing is better preserved through the more traditional forms of knowledge transfer including storytelling and genealogies that do not require that same level of academic scrutiny.

Through a series of focus groups and interviews in the form of talanoa, the findings of this study support the nurturing of storytelling and genealogies, enhanced by modern technology as a means of capturing and passing on personal experiences, family histories, ancestral profiles, and connections between individuals across the generations.

The findings will benefit government and community initiatives that seek to preserve culture and identity at all levels of human society in Aotearoa New Zealand.

Education at the crossroads: To be social justice or not to be?

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Methodology: This presentation highlights the experience of teaching a diverse cohort of students within Unitec's Bachelor of Social Practice Degree. It draws from the reflective practice of two senior Kaiako, discourse analysis, and research undertaken (primarily with Pacific students) around factors that support success and retention.

The context: Through structured reflection we explore the juxtaposition of two potentially competing ideologies. That is, between a discourse of social justice (equality and equity for our diverse ākonga) and a discourse of neo-liberalism. The resulting tension is between education as social empowerment (with learners in the centre) and an approach to education which places the market as the central driver of effective education.

Through this research it has been ascertained that ākonga who have undertaken this degree programme cite motivations of collective wellbeing, community improvement and sharing diverse narratives as primary drivers for their study. The intrinsic values of serving their communities and establishing pathways less difficult for future generations (often of people who look, think and have experienced similar challenges as themselves) overrides the desire of monetary and reputational gain. Their interest is often a collective one rather than individual achievement

Implications of research: This presentation argues for the need for counter discourse (strategies of resistance) that centre relational teaching and learning as foundational to quality social work education within this Neo-Liberal framework. The degree has ākonga who come from marginalized communities at the intersection of social criteria such as class, ethnicity, gender, ability, nationality and sexuality. Many who themselves have experienced the effects of discrimination, colonisation and globalisation (through migration) living in Aotearoa New Zealand.

Our learners are not commodities within a market; they are the future of social work practice. We therefore challenge our fellow kaiako to consider the ways that the education they deliver is not driven by policies of efficiency but rather education that recognises and affirms ākonga aspirations and their desire to see positive social change in the family/whanau/aiga and communities they will serve.

"She'll be right"; or will she? Factors influencing MIT's knowledge, understanding and perceived competence when using digital imaging technology

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Background: Medical imaging has always undergone consistent change; however, the introduction of digital technology has accelerated that process. Digital imaging offers multiple benefits; nevertheless, concerns exist about Medical Imaging Technologists (MITs) becoming deskilled due to over-reliance on this technology, with limited research on its impact on MITs' knowledge and understanding.

Aim: To describe and identify factors influencing MITs' knowledge and understanding of digital imaging and its application and their perceived competence in using digital technology.

Research Questions:

1. What knowledge, understanding and perceived competence do MITs have regarding digital technology and its application?
2. What factors are related to MITs knowledge of and perceived competence in using digital technology?

Methods: This research presents the findings of the second phase of a sequential exploratory mixed methods study; using a cross-sectional survey.

Findings: The research demonstrated a disconnection between MITs' knowledge of digital imaging systems and their perceived competency levels. The participants ranked their competencies highly, although this was not supported by the level of knowledge demonstrated.

Specifically, a difference in knowledge for MITs who received undergraduate education in digital technologies compared to those who received applications training, was highlighted; suggesting the pedagogical approach used for applications training may need to be revised.

The high levels of competence selected could suggest that the participants overestimated their abilities and may not have considered their practice needed additional underpinning theory. Alternatively, MITs may use experiential learning and routine clinical decision-making when ranking their competency levels. While this is not necessarily problematic, the different nature of digital imaging systems compared to previous systems in terms of image capture, response to radiation and image display is known to have led to increased patient dose.

Conclusion: The findings imply an ongoing need for undergraduate curricula to review course content to remain current, reflecting new technologies. There is also a significant requirement to ensure that on-the-job training is pedagogically sound, reflects the needs of the learners, incorporates underpinning theory and practical applications, and is offered on an ongoing basis. These recommendations could be applied across the healthcare sector to support patient safety when introducing and implementing new technologies.

Exploring best online assessment practices to cultivate academic integrity in nursing education in the current era of educational digitalisation and massification

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This study, using a convergent mixed-method research design, aims to learn about the optimal test invigilation procedures to cultivate nursing students' integrity in an era of educational digitalisation and massification. Although educators aspire to students/graduates guided by high integrity levels, research, and personal experience show that this ideal is not always the reality irrespective of culture, religion or background. Several studies found that cheating in assessments often relates to dishonesty in the profession.

Cultivating integrity is multifaceted, and complex; involves ethical education, encouragement and discouragement, internal and external motivation, addressing perceptions, and social issues. In one study participants described punishment and education as the strongest reasons for not cheating. "It is simply wrong" was ranked the lowest. Another study reports students admitting that cheating is unethical, but perceiving it as normal and therefore acceptable behaviour.

Massification (increased student intakes amid limited resources) necessitated assessment digitalisation (using online tests) in the Nursing school where the researcher is teaching. ProctorU, a remote proctoring service with access to biometric- and video-based techniques, was recruited to monitor remotely done online tests efficiently. It enabled asynchronous and home-based test administration by recording student activity through webcam, audio, screen, keyboard, and system logs. These features make remote proctoring more comprehensive, but more invasive, than classroom invigilation. However, is more invasive and stricter assessment supervision the best way to develop academic integrity? Answers to this question are especially relevant in self-regulated professions (like nursing) where the professionals' integrity forms the basis of the social contract.

This presentation focuses on findings from literature, and from nursing students' perceptions regarding assessment practices to cultivate integrity. For this purpose a literature review of research reports since ProctorU's founding (2008) was integrated with the information obtained from the analysed results of an anonymous questionnaire (with open-ended and closed-ended questions).

Rise of Women Skateboarding in Aotearoa, New Zealand

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Research Objective: This study explored the development of women's skateboarding and social dynamics in Aotearoa, New Zealand (NZ).

Methods: Employing a social constructionist approach, this research used qualitative methods, including 25 in-depth interviews, participant observations, document analysis, and secondary data exploration. Data was collected between late 2018 and mid-2022, with participants from skateboarding-related for-profit and non-profit organisations and community groups.

Results and Discussion: Like other countries, NZ has experienced a steady increase in girls' and women's participation in skateboarding. This phenomenon has grown regardless of a male-dominated sub-culture whose dominant discourse of masculinity marginalises women and girl skaters. The proactive efforts by women and girls organising "girl-only" skate jams, competitive events, social media groups, and niche skateboarding media have primarily contributed to the growth in popularity. Skate schools have also played a key role by providing girl-only coaching sessions and supervised environments during these sessions. Olympic inclusion and the International Olympic Committee's mandate to ensure gender equality have provided more visibility of competitive women's skateboarding and for competition organisers to take the women's event more seriously.

Although some male skaters identified that the rise of women's skateboarding is positive, marginalisation is still evident. While there has been more recognition of competitive women's skateboarding at competitions, further steps are still needed towards providing adequate age grouping and equal prize purses. Consequently, rather than from inside the prevalent NZ skateboarding scene, NZ women's skateboarding scene has grown organically alongside

Significance: This research extends the existing literature knowledge by documenting the rise in popularity of women's skateboarding in the NZ context. It has further implications for governmental bodies such as Sport and City Councils in allocating physical activity funding to get more girls and young women active in Aotearoa.

Benefits and limitations of weight loss and gas flow measurement for long duration micro-fermentation monitoring

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This study aims to assess the benefits and limitations of weight loss and gas flow measurement for long duration micro-fermentation monitoring. It will assess the existing literature and validate findings with experimental data from a data logging laboratory micro-balance and custom gas flow apparatus.

The study supports on-going research with wine scientists using laboratory experiments to study the behaviors of yeast and grape must and the compounds they create. Traditionally micro fermentation monitoring uses weight loss of samples as an indication of CO₂ production and thus fermentation rate. It is done by manually recording the weight loss of samples at 12-24 hour intervals over an extended period (2-8 weeks) but suffers from limitations including operator errors, lack of resolution during the initial fermentation period and inaccuracies due to loss of water vapour and volatile compounds.

By studying of factors affecting long term variability of microbalances and semiconductor sensor technologies their effects on the accuracy of measurements at low and high fermentation rates will be assessed. This will then be tested experimentally under static conditions using a mix of custom and commercial apparatus.

Initial results suggest that variations will have limited significance during the initial phase of fermentation when CO₂ production is at its highest but may result in significant errors when fermentation rates are slow. Ways to mitigate this are being investigated.

If successful these methods will allow for higher resolution of micro-fermentation data with less potential for operator error. This may allow small variations in fermentation to be related other data such as thiol production. The data will help develop an automated system which allows the control of laboratory experiments to better replicate commercial fermentation, thus enabling assessment of effects of factors such as climate, soils, variety and pressing on much smaller samples of grapes.

Bridging Classroom and Clinical Practice: The Impact of Team-Based Learning in Imaging Interpretation

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Introduction: Team-Based Learning (TBL) offers active learning by organizing students into teams, where they collaboratively solve clinical problems and apply theoretical knowledge to real-world scenarios. Over the past five years, TBL has effectively bridged the gap between classroom learning and clinical practice for Year 3 medical imaging students.

Aim and Objective: This study aims to evaluate the impact of TBL in the HEAL7173 Imaging Interpretation course over five cohorts, assessing its effectiveness in enhancing students' understanding and equipping them with the skills needed for complex clinical environments.

Materials and Methods: A mixed-methods approach was employed, involving 200 students across five consecutive cohorts (40 students per cohort). Student performance was measured through individual readiness assurance tests (iRATs) and team readiness assurance tests (tRATs). Comparisons of test scores across cohorts were used to assess improvements in team performance. Anonymous end-of-course surveys gathered student feedback on their perceptions of TBL, using Likert-scale questions and open-ended responses to identify themes related to confidence, teamwork, and clinical preparedness.

Results: The five-year implementation of TBL in the HEAL7173 course resulted in significant improvements in both student performance and perceptions. tRAT scores were consistently higher than iRAT scores across all five cohorts ($p < 0.001$), with statistically significant improvements observed over the years. Survey responses revealed that students felt more confident in interpreting complex clinical imaging cases and reported enhanced teamwork and problem-solving skills. Key themes from student feedback included greater engagement in learning and appreciation for collaborative learning. Many students noted that TBL helped them better prepare for real-world clinical environments by simulating the collaborative nature of clinical teams.

Conclusion: TBL has proven to be a successful strategy in preparing medical imaging students for clinical practice, enhancing both their academic performance and clinical readiness.

Social Workers in Schools: from an Educator's perspective

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This research explores the role of SWiS in New Zealand schools and whether they help our children to achieve. To find out how effective the SWiS are in helping our Tamariki achieve at school and whether they should be in all New Zealand schools. The two research questions include: Question 1: What are the teachers' understanding of the role of SWiS? Question 2: How can we effectively persuade the Government of the benefits of deploying a Social Worker in every school for the holistic well-being of our Tamariki? The literature says that from a global perspective, it has been demonstrated that SWiS has been present in schools in various countries for many years, with positive outcomes reported in terms of improved academic performance and reduced truancy rates. However, more research is needed to support these findings, especially in countries outside the United States. The research's theoretical underpinning is Solomon's empowerment theory, which saw schools as places of empowerment for children. This research is qualitative and uses a case study methodology. Three participants, all teachers, were interviewed using a semi-structured interview. The findings from the participants illustrate that SWiS are needed in all schools as teachers now must deal with more anxiety among children after the COVID-19 pandemic, which is now impacting classroom teaching time. The implications for research include the need for more data on how effective SWiS is in helping children achieve academically and whether it helps reduce our tuition rates. The implications for practice could be introducing SWiS into all New Zealand Schools regardless of decile ratings. The Government should provide more funding for the SWiS programmes so that SWiS are present in every school.

Miss

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This research addressed the importance for educators to develop self-determined learning and empower students to take ownership of their learning, in the contemporary educational landscape.

Reflections highlighted that there were gaps in understanding and application of self-determined learning among teachers and students, prompting the development of this research, which fostered self-determined learning through a blended learning model that harnessed the potential of collaborative groups. This research explored the implementation and impacts of the blended learning model, demonstrating reduced dependency on teacher support and enhanced collaborative dispositions among students. It highlighted the importance of ongoing research into self-determined learning and the evolving role of teachers in facilitating it. The findings also highlighted the importance of teachers demonstrating effective North East teaching capabilities and shared authority between teachers and students in fostering self-determined learning. Overall, this research contributed to understanding and improving self-determined learning through carefully structured group interactions, assigned group roles and reflective practices.

I am a teacher but not just a teacher. I am an Art teacher and that makes me different. My studio is my classroom, a negotiated space. A home to many artists every day.

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This presentation details the investigation of the relationship dynamics in a secondary school visual arts classroom. The case study examines the relationships between kaiako (teachers) and ākonga (students), ākonga with one another, and both groups' interaction with the physical space of the visual arts classroom

Using visual research methods I document and represent the pulse and patterns of these relationships. The relationships in the teaching of the visual arts are intensely felt. In collaboration with others in the art space ākonga share perceptions of their that cannot be expressed verbally. The characteristics of visual arts teaching practice involves a process of being with others, transformation for both kaiako and ākonga, and growth towards becoming- other.

There are questions surrounding the degree to which the dynamic, embodied, relational nature of secondary visual arts teaching practice can be known. I employed visual research methods, using practices from visual and graphic arts to document and analyze the relational dynamics within the classroom.

International studies that explore the visual arts in education are few however those that explore the teaching in a secondary school visual arts classroom in Aotearoa New Zealand are even fewer. Given the paucity of research into secondary visual arts practice and considering that Existing research is predominantly text-based and focuses mainly on teachers, leaving student teacher dynamics underexplored.

To address this gap, I present the findings through multimedia artworks, translating data points into visual and graphic elements that reflect both the aesthetic and relational aspects of the classroom.

Development of learning resources for teaching design of light steel framed houses in New Zealand

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This paper describes the process of developing new learning resources for use in New Zealand polytechnics to teach architectural technology students design of light steel framing elements for a New Zealand house. Methodologies include qualitative research and document analysis to evaluate existing resources such as NASH Standards and NZS3604 to identify potential gaps. A case study will be done of the development process to ensure coverage of various teaching contexts including online and face to face. PowerPoint slideshows, drawings, 3D models and quiz activities will supplement to enhance learning. Collaborative enquiry is employed as the project involves working with industry to generate materials for peer review by teaching colleagues and stakeholder partners. Due to being there being arguably no participants the ethics position will require confirmation from the Unitec Ethics Committee. The co-author who is an industry stakeholder requested the materials development from Unitec and was not selected by the institute. There is a need for this type of teaching material due to the housing industry in New Zealand being historically focused on timber framed housing meaning that residential frame design education up to now has been almost entirely based on the acceptable solution for timber systems, NZS 3604. The new light steel framing teaching materials produced will help colleges address the present learning gaps in the tertiary sector and elsewhere whilst also encouraging colleges to explore the possibilities of light steel framing design due to valuable and current resources being readily available. Light steel framed house design is not extensively taught in the New Zealand at present despite the approach being widely used within industry and growing. The new resources produced will therefore add substantially to the academic knowledge base and help ensure students are ready to work on projects where clients wish to use the light steel framing approach.

Urban Growth and Climate Resilience in Auckland and the Golden Triangle

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Aim/Objectives of the Study: This paper examines the urban growth of the Auckland region exploring whether Golden Triangle development might offer solutions to Auckland's urban challenges.

Context/Relevance of the Research/Problem Statement: Auckland faces significant growth through migration, leading to housing shortages and infrastructure challenges in transport, schools, and hospitals. The city's response has been CBD densification, supported by new public spaces and the city rail link. However, climate change poses an urgent challenge, with 100,000 homes in Auckland within the 100-year flood zone and additional risks from sea level rise and landslides. This dual pressure of accommodating new migrants and ensuring the safety of current housing places Auckland at a critical juncture.

Simultaneously, the Golden Triangle, encompassing Auckland, Hamilton, and Tauranga, is emerging as a novel urban development. Unlike traditional cities centred around ports or rivers, this new city is structured around transport networks, logistics, and inland ports. Significant developments include office campuses and logistics warehouses in South Auckland, the Tauranga Crossing malls, and the Ruakura inland port.

Methodology and Methods: The study employs the "flying geese" concept, which describes manufacturers shifting from capital-intensive to labour-intensive regions. This concept now refers to manufacturers relocating from coastal to inland areas. The high land prices and labour costs in Auckland no longer support leading manufacturers, making the cheaper land and abundant lower-waged workers in the Golden Triangle an attractive option. Additionally, the convenient port location and sound transportation infrastructure support this relocation. The study also maps development zones safe from climate change effects, such as avoiding flood zones.

Results: This initial study aims to integrate logistic planning and climate change modelling, discussing the spatial consequences for the Golden Triangle's development and the emergence of new urban centres.

Significance and Implications of the Research: The Golden Triangle represents a shift towards a decentralised urban form driven by land economics and connectivity, offering a potential blueprint for future urban development in response to growth demands and climate resilience challenges.

Te Ararata West, Low Impact Flood Mitigation Strategy

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Aim/Objectives of the Study: The disastrous flooding on Anniversary Day 2023 in Tāmaki Makaurau underscored the need for practical strategies to build resilience against urban flooding. This study focuses on a case site in Māngere, severely affected by the flood, proposing a new design methodology that integrates conventional environmental catchment planning with urban design techniques.

Context/Relevance of the Research/Problem Statement: Te Ararata West's land ownership is predominantly Kāinga Ora homes, with 88 out of 240 homes in a floodplain and nearly all in flood-prone areas. The January 2023 flooding rendered 160 homes in Te Ararata unlivable, including some in the highlighted Te Ararata West site. Future flooding is inevitable without effective mitigation strategies. Kāinga Ora's development plan for Te Ararata West proposes 1,000 new dwelling units in the floodplain, aiming to meet development yield targets. However, their flood mitigation strategy, which includes five small stormwater areas, may be insufficient given the anticipated water flow rates of $5.58\text{m}^3/\text{s}$, $2.35\text{m}^3/\text{s}$, and $1.15\text{m}^3/\text{s}$ at peak flow in two years. The addition of more impervious surfaces from the proposed medium-density dwelling units will further exacerbate stormwater runoff.

Methodology and Methods: The study aims to reduce the urban footprint of Te Ararata West, increase water soakage, and collect flooding from impervious surfaces. The proposed design model explores the idea of apartment buildings, rather than terrace housing, paired with generous green spaces to enhance soakage and create new public spaces.

Results: The master plan proposes three detention ponds, each sunk 1.5m into the ground, capable of holding a collective $38,000\text{m}^3$ of water. These ponds are situated near green spaces and will serve as public open spaces when not flooded. Each pond will be equipped with a gate to drain water once the stormwater infrastructure can handle it. The proposed water detention ponds honor Nga Tapuwae a Mataoho "The Sacred Footprints of Mataoho" surrounding the Te Ararata West site.

Significance and Implications of the Research: This case study offers a design methodology for detaining floodwater and suggests a new urban design model that actively avoids contributing to flooding. The implications for future urban development in Tāmaki Makaurau include a different urban model with more public green spaces to keep citizens safe from future flooding.

Impervious Surfaces and the Future of Urban Design in Tāmaki Makaurau

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Aim/Objectives of the Study: Building a more permeable city is an important strategy that has emerged from understanding the causes of flooding and the impact of impervious surfaces. This study aims to explore how reducing impervious surfaces can influence the practice of urban design and landscape architecture in Tāmaki Makaurau.

Context/Relevance of the Research/Problem Statement: Since the disastrous Anniversary Day floods in 2023, there has been heightened awareness of the connection between flooding and the impervious nature of our city. The concept of a “sponge city,” which emphasizes making urban areas greener and more absorbent, has become part of everyday vocabulary. This research seeks to understand the implications of reducing impervious surfaces for urban designers and landscape architects.

Methodology and Methods: Using ArcGIS, researchers selected several sites in Tāmaki Makaurau that exhibit typical urban morphologies. These include suburban houses with gardens and street patterns, as well as inner-city apartments. Six typical urban configurations were chosen. An impervious versus pervious surface analysis was conducted. The rational method was then used to determine the amount of runoff from each block.

Results: Some of the results were obvious for example, suburban areas are generally more pervious compared to inner-city apartment zones. However, some findings were surprising. For example, housing in Hobsonville, an urban development often cited as a model for future housing, has a high percentage of impervious surfaces, potentially exacerbating flooding. In contrast, modernist houses in Freemans Bay, with the same density as Hobsonville, are much more permeable and thus more resilient to flooding.

Significance and Implications of the Research: As Tāmaki Makaurau continues to grow, and with climate change increasing the frequency of flooding, how and where we build housing is a critical issue. This research will help develop housing models that maintain density while enabling rainwater to be absorbed rather than contributing to future flooding.

Framework for developing an automated manufacturing cell

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This project aims to fully automate a manufacturing process, including financial accounting and distribution.

The research explores systems integration and process control, using a physical model of a manufacturing line that assembles various combinations of plastic blocks and stores them on multi-layer shelving. The study focuses on integrating control of the process using a programmable logic controller (PLC), with supervisory control and data acquisition (SCADA), and enterprise resource planning (ERP) software. Coordinating these systems aims to increase the efficiency of the process and those that support it by providing real-time information and control, as well as interfacing with other systems involved in the business.

The research methodology focuses on designing the system architecture and structuring it appropriately to allow logical communication between a PLC, the SCADA and ERP software (XERO in this case). Also documented is development of a stock control and ordering system, as well as steps towards the automation of invoicing through Xero.

Initial results demonstrate good efficiency in process control, and a scalable framework for further integration with ERP software. This can enhance the flexibility and productivity of existing manufacturing operations, or new enterprises interested in leveraging opportunities created by industry 4.0 manufacturing.

Our long-term future work includes automation of a parametric design and integration of a parametric design system into the SCADA package. The intention of this will be to allow the consumer to enter a number of design parameters into a web-based SCADA system and have the automated manufacturing system manufacture, invoice and dispatch the consumer specified design.

Addressing the needs of the community in responding to the youth justice system

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Despite attempts and efforts by the government, NGOs, and communities to devise policies, the number of young offenders remains high. According to the Youth Justice Indicators Summary Report 2023, youth crime within New Zealand has been statistically declining since 2011/12. The total rates of juvenile offences fell by 63% and 64%, and the rate of youth court appearances decreased by 65% between 2011/12 and 2021/12 (Ministry of Justice, 2023). However, through media, we see an increase in the severity of crimes, from assaults to burglary and murder. This presentation draws from some findings of a funded research project at Manukau Institute of Technology (MIT) and the collaborative work with Oranga Tamariki that explores the community's needs in responding to youth offending. The research project focuses on supporting the Auckland Youth Justice region's community and after-hours response teams. The research question includes the following: What is the effectiveness of the after-hours approach to the well-being and safety of rangatahi, After-hours response teams, and the community? The Ethics Assessment Team, the Evidence Centre, and the Research and Data Access Committee, Oranga Tamariki have approved the ethics application for this qualitative research project. The data was collected through 16 individual interviews with the staff involved in the After-hours response teams and remand homes, such as social workers, supervisors, managers, and remand home leaders. This presentation illustrates findings that examine gaps and responses, improve outcomes, and investigate if further assistance and resources are required for the after-hours approach. The data will indicate the importance and benefits of government and community working together to support rangatahi, the youth justice system and the community.

I am wahine, hear me roar! Wahine raising awareness by vocalising their experiences and identifying how psychological abuse is exposed in relationships

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With an increasing amount of abuse apparent towards wahine, follows the lack of attention that is desperately needed to bring awareness around psychological abuse in relationships. This research project is about raising awareness and identifying psychological abuse towards wahine in relationships. My aim is to vocalise the experiences of wahine that have encountered psychological abuse in the hope that it will bring awareness to wahine who are unaware. My research questions include: (1) How does psychological abuse affect wahine in relationships? (2) What positive changes are made once wahine leave their relationships? (3) How can we raise further awareness towards psychological abuse in relationships? The literature review highlights how psychological abuse appears in relationships, how it effects wahine, the risk factors, why wahine stay, and the gaps surrounding psychological abuse. My research intertwines with the attachment theory by exposing specific types of attachments we have as adults, due to our upbringing. This theory impacts the choices and behaviours we make as adults; therefore, it becomes a factor in the unhealthy relationships wahine end up in. I have conducted qualitative research with a case study methodology by applying face-to-face interviews. My three participants work with wahine from a women's refuge, counselling, and with women who offend. My research findings illustrate that psychological abuse in relationships is a common occurrence, with little acknowledgement of the damage it creates. All participants agree that psychological abuse should be given more attention through diverse actions. The implications for this research include expanding on who we have as participants. If given the opportunity to interview participants who have experienced psychological abuse, could possibly lead to further data collected. The implication for practice begins with bringing awareness. This will involve age-appropriate education within our schools and changing the priority of psychological abuse towards wahine in mental health

Bridging Professions: Inclusive Creative Arts Experiences to Support Inclusion in Early Childhood and Beyond

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This presentation will explore the role and perceptions of early childhood teachers and creative arts therapists in facilitating creative arts experiences such as music and movement, drama, visual art and dance for autistic children within inclusive and therapeutic settings. As this thesis is in progress, I will focus on the research design, methodology and theoretical framework that guide this investigation. The research will draw on Critical Autism Studies (CAS), and the neurodiversity paradigm, grounded in sociocultural and constructivist theories. The overarching intention is to highlight both the distinctions and the common ground in the philosophies and methodologies of early childhood teachers and creative art therapists to foster a more comprehensive understanding of how experiences in the creative arts may enhance the wellbeing of autistic children within inclusive educational settings. There is little qualitative research literature addressing teacher pedagogy to facilitate the engagement of autistic children in the creative arts alongside their (neurotypical) peers. This study seeks to draw on the specialised training of creative arts therapists and early childhood teachers with the aim of sharing perspectives and knowledge between the two professional groups. Although data collection is ongoing, this session will provide insights into the conceptual framework and expected contributions of the study. Feedback on the research approach will be welcomed to refine the ongoing work.

A systematic review of Lean in Construction research in New Zealand academia.

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Over the past decade, Lean has been of key interest to academia and the construction industry worldwide. There are academic publications from many different countries seeking to understand the benefits and challenges and to support the adoption of Lean in the local construction industry. Similarly, Lean Construction has attained enormous attention in the New Zealand construction industry over the last 10 years. However, academic research to promote and support the New Zealand construction industry is still emerging.

This paper aims to identify and accumulate research on Lean in New Zealand academia to understand the nature of the publications and contributions of different researchers and academic institutions. To do so, this research was conducted through a systematic review using online databases and a manual review of the New Zealand BIM researcher's profile.

This research provides deep insights into BIM research in New Zealand academia. It could be considered baseline information for academia and government to have effective strategies for future Lean Construction research.

Exploring the current status of digital technologies implementation in New Zealand construction industry

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The Architectural-Engineering- Construction-Operation (AECO) industries play a vital role in the progress and development of societies by collectively contributing to the national GDP, improving quality of life through housing and infrastructure, and generating employment opportunities. However, the AECO industry faces several challenges, including project delays, cost overruns, sustainability issues, environmental concerns, labor shortages, supply chain disruptions, regulatory changes, and difficulties in adopting technological advancements.

These challenges are being met with various strategies by the industry, workforce training, lean construction practices, sustainable measures and technological innovation including Building Information Modeling (BIM) and other digital technologies.

In New Zealand, the construction industry also encounters similar issues and is working to overcome these challenges by adopting new technologies and best practices. This research aims to investigate the current status of digital technology adoption within the New Zealand construction sector. By utilizing a qualitative research methodology with a focus on document analysis, this study will identify key digital technologies employed, their purposes, and their impact on the industry.

The findings will provide a comprehensive overview of the current state of digital technology utilization in New Zealand's construction industry and offer insights for future research. Additionally, the results will assist industry practitioners in enhancing the integration of digital technologies to improve productivity and address industry challenges.

Impact of Electric Vehicle Fast Charging on the Power System Voltage stability

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Environmental and health issues related to air pollution and the energy security concerns are factors that have led to the high penetration of electric vehicle (EV) in New Zealand and other countries. With the improvement of battery and charging technologies, it is anticipated that the rate of EV uptake will further increase, i.e., integration of a relatively large load demand with completely different load characteristics from other conventional system loads to the power grid. This requires studies on the EV different impacts on the power system and developing the remedial measures before it is too late. Many studies have already been carried out on the issues like increased peak demand, voltage reduction, harmonics, and over-loading the distribution systems. However, attention hasn't been paid to the impact of EV on the power system voltage stability.

In this paper, a simple innovative method is used to show how the local load bus measured voltage and current can be used to identify on-line a possible voltage collapse resulting from a voltage instability in a system consisting conventional loads and EV load. The proposed method is confirmed using MATLAB simulation.

The findings of this study may help to anticipate and avoid a possible power system blackout by assessing online the power distance from the stability limit. This can be used toward adaptive fault analysis and enabling robust protective relay settings.

Inside out: a pathway toward non-custodial, therapeutic support facilities for justice-involved women in Aotearoa

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Our women's prison system is failing both prisoners and the public alike. The recidivism rate for female offenders in Aotearoa is 33 percent; this rate increases to 48 percent for those who are re-incarcerated. The more times someone has been to prison, the more likely they are to return. While women make up just six point four percent of Aotearoa's prisons, 66 percent of those women are Māori, highlighting the significant disadvantage that the judicial system inflicts on our indigenous population. The intergenerational damage caused by incarceration means the problem of prison is self-perpetuating.

Crime impacts the broader population at many levels. While some are unfortunate enough to be directly harmed by crime, everybody pays for it in the reduction of public spending that would otherwise be available for different public sector services. Incarceration is expensive. According to the Department of Corrections 2023 Annual Report, the Department's total operating expenditure for the 2022-2023 financial year was two billion dollars. The average daily cost per convicted prisoner was \$555 and per remand prisoner \$452; in contrast, the daily cost per person serving a community sentence was \$72.

It is in the public interest to find a better way to address crime than incarceration. The invisibility of women's prisons and the cost to facilitate them is intrinsically linked to society's willingness to support custodial sentences and tough-on-crime politics despite any evidence that this approach is effective. Women, in particular, are more adversely affected by the blunt correctional tools of incarceration and solitary confinement. The Department of Justice's statistics reflect the success of community-based rehabilitation programs over incarceration-based sentencing. Most notably, the 2022 community-based Women's Short Rehabilitation Programme substantially reduced recidivism rates of all sentence types. The issue identified in this research is the need for more community-based facilities available to run support programs, especially for women experiencing housing insecurity.

There is a clear gap between the extremity of forensic healthcare facilities and prison versus community sentencing. Prison provides on-site skills-based training and temporary relief from financial pressures but lacks fundamental emotional empathy, social connection, and real-life context. Community sentencing provides home context but can exasperate financial pressures and does not provide consistent therapeutic support programs. This research aims to discover a place in between the damaging environments of incarceration and the unsupported space of community sentences. A safe space where therapeutic support can lead toward restorative justice outcomes.

Barriers Male Secondary Students encounter when considering counselling at school

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Mental health statistics clearly show male secondary school students experience as much mental and emotional distress as their female peers. In fact, they are more likely to die or be seriously harmed due to struggles with mental or emotional issues. And yet male students are three times less likely to seek support from school counsellors than their female classmates. Previous research convincingly shows that male students represent only one third of the counselling clients supported by school counsellors. Why is that?

This presentation reports on the second phase of a multi-year project. The primary researcher consulted 700 high school students randomly drawn from Year 10 and Year 12 cohorts in seven representative schools across the motu. 280 students participated in focus groups and a further 420 completed a written survey. Detailed insight was gained into student perceptions and attitudes toward engaging with school counsellors from those that had been clients and those who had not. Qualitative data analysis was undertaken utilising a thematic analysis framework to identify themes and patterns. A process of open coding and categorization lead to the identification of key themes which were consolidated through the analysis phase. The survey data were analysed through correlations and p-factor analysis to identify the barriers and constraints uniquely faced by male students.

Our findings address key questions: What facilitates male student willingness to engage? What can the New Zealand Association of Counsellors (NZAC), Ministry of Education, and our local secondary schools do to positively affect male student willingness to seek the support of their school counsellor in times of need?

The conclusions have implications for the recruitment, training, and hiring of the school counsellor workforce going forward and the provision of counselling services in secondary schools across Aotearoa, New Zealand.

Engine bore reconfiguration

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This study is a computational analysis of internal combustion engines generally used in motor vehicles in the transportation sector. In this study the conventional design of engines has been analysed and limitations established. A revised design is proposed to overcome those identified limitations. This study is restricted to discussions on mineral fuel fired internal combustion heat engines, now most commonly used in transportation. A conventional piston engine uses reciprocating pistons in a cylinder bore connected to a crankshaft by a connecting rod. Combustion in the cylinder is intermittent where it is timed to provide a resulting high pressure to create torque at its output. This study challenges the conventional arrangement and proposes a redesign that will improve the performance of the engine.

Exploring the use of AI (Artificial Intelligence) in construction contract administration

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This study examines the complexities of construction contract administration, a process often contributing to disputes, delays, and industry insolvency. Contract administration involves tasks such as documentation, compliance monitoring, and payment processing, which are typically manual and prone to inefficiencies and errors. While automation has improved some areas, the construction industry's slow adoption of these technologies stems from resistance to change and limited awareness of digital solutions. In contrast, Artificial Intelligence (AI) has advanced in other sectors, offering capabilities like predictive analytics, natural language processing, and machine learning. AI presents an opportunity to transform construction contract administration by enhancing efficiency, reducing disputes, and minimizing human error. It could streamline tasks such as risk assessment, contract review, and real-time compliance monitoring while integrating with existing automation tools for a more data-driven approach. This research assesses AI's potential to reshape contract administration and explores its application across the project lifecycle. Methodology of this research follows a systematic approach to identifying, filtering, reviewing, and analysing published literature most relevant to the topic of AI in construction, identifying key themes and research gaps. Over 40 articles were shortlisted after extensive search on Google scholar. The articles were selected using the keywords AI, Contract administration, Construction and challenges from 2020 to 2024. The data were analysed through thematic content analysis. The study's outcomes highlight challenges—such as industry resistance, regulatory issues, and technical limitations—that hinder AI adoption, in addition to current status of industry uptake in this area. Ultimately, the research also provides the insights into future opportunities for AI integration, offering a pathway toward more efficient, resilient, and sustainable contract administration practices. These outcomes can support government and industry organizations to promote AI adoption and overcome barriers for contract administration in the construction industry.

Tauira kaiako relational ecology: Sustained regard for personal circumstances and collective commitment

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The project Senses of Hauora and Wellbeing in ECE evolved from Initial Teacher Education (ITE) community discussions facilitated by Healthy Families Waitakere in 2020. Feedback from these discussions galvanised four ITE Early Childhood Education providers to unite and address their collective concerns for the hauora and wellbeing of tauira kaiako (student teachers) when studying and entering the ECE profession.

This presentation draws on this research which explored their experiences and starts to unpack Mason Durie's (1999) phenomenological approach of identifying the elements in the story. We identify and honour tauira kaiako key lived experiences. The concept of relational ecology will be introduced to navigate the journey with the aim to equip tauira kaiako to care and advocate for their professional selves with a professional tool-kit.

In a previous presentation we challenged the ITE providers and this time we are challenging the wider ECE profession to prioritise resources for hauora as sustainable wellbeing for tauira kaiako.

Power-Profile and Thresholding Assisted Feedforward Neural Network based NILM method applied to Balanced Data

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A Non-Intrusive Load Monitoring (NILM) is simple, low-cost and easy to implement as compared to Intrusive Load Monitoring (ILM). There has been a great interest in devising a universal NILM method for the purpose of energy disaggregation; This method aims to identify the operation and duration for any appliance from the aggregated electrical demand profile data. As a result, significant number of research articles are published in different conference proceedings and peer reviewed journals related to this issue. In this research, a NILM has been developed to classify home appliances based on their power usage patterns employing the Reference Energy Disaggregation Dataset (REDD). In this regard, binary labelling is applied to represent clear status of various appliances and windowing technique is utilized to cleanse data by removing outliers and power spikes. Additionally, data is balanced by employing various sample size limits, which reduce spurious transient data or non-consequential small data classes. Considering total power consumption as a feature, a simple feedforward neural network (FNN) with a hidden layer is trained for these purposes. The proposed methodology has been implemented on both REDD House 1 and House 3. Evaluation metrics such as accuracy, precision, recall, F1-score, demonstrate high performance using this method with varying levels of success. Further, model accuracy and loss plots illustrate the model's performance across training epochs, confirming the effectiveness of the proposed NILM technique.

Unleashing the power of Community funders and philanthropics: The economic and social benefits of investing in impact-first housing projects

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Housing affordability and accessibility are critical issues in Aotearoa New Zealand, posing significant economic, social, and political challenges.

In this presentation I share about my research project "Unleashing the power of Community funders and philanthropics: The economic and social benefits of investing in impact-first housing projects" which explores the transformative potential of community funders and philanthropic organisations in addressing the affordable housing crisis through impact-first investment strategies.

This study projects aims to provide evidence on the economic and social benefits of such investments, demonstrating how these stakeholders can contribute to increasing affordable housing supply and improving community well-being.

The methodology involves a mixed-methods approach, combining quantitative surveys and qualitative in-person interviews with key stakeholders, including community funders, philanthropic leaders, policymakers, and housing sector practitioners. This approach enables a comprehensive analysis of the current capital limitations within the housing sector and assesses the willingness and capacity of philanthropic organisations to leverage their financial resources for social good.

Preliminary findings suggest a significant gap in capital availability for housing projects, alongside a growing interest among philanthropic funders to engage in impact-first investments. The results underscore the potential for these investments to yield like-for-like risk-adjusted returns for funders while simultaneously delivering meaningful social outcomes for communities. Additionally, the research highlights the importance of collaborative approaches and strategic partnerships in maximising the impact of such investments.

The significance of this research lies in its potential to influence policy and practice by demonstrating the value of integrating philanthropic capital into housing solutions. The findings are expected to inform policymakers, encourage institutional investors—particularly KiwiSaver providers—to support community housing initiatives, and guide philanthropic stakeholders in their efforts to create lasting social change. Ultimately, this study contributes to the broader discourse on sustainable housing solutions and the role of innovative funding mechanisms in addressing pressing societal challenges.

Estimating the Cost of Digital Twin Technology in Enhancing Site Safety - A Case Study of NZ Construction Project

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The construction industry is known for its on-site risks and accidents. The spike in injuries and accidents on construction sites has drawn significant attention to the dangers of working in this industry. As a result, visualization remains critical for project owners and contractors in laying out and implementing risk mitigation strategies at construction sites. These challenges now could possibly be addressed by digital technology. Digital Twin technology (also called data twin) is emerging as an essential tool for construction projects and is an exact digital replica of a construction project in real time. Project teams can experiment digitally and analyse expected outcomes before they make changes that affect the actual physical building, structure or work site. The insight this technology provides, can help in future decision making and offer invaluable insight into day-to-day operations. These benefits encourage the research in managing health and safety at construction sites. However, there is still a lack of clarity in the budget requirement for the contractors to plan for implementing such a tool. This study aims to investigate the feasibility of digital twin technology in effectively managing the construction risks at site and the cost associated with its implementation. The research will be carried out by analysing a case study of a construction project in New Zealand specifically looking at the costs associated with the implementation of the twin technology for managing risks at site. The construction risks at the identified case study site will be collected and the approximate cost for the required tools, components and technology will be estimated. The research outcome will help the industry to budget the cost of twin technology in enhancing safety practices in New Zealand construction industry.

Childhood Play Schemas as an Indication of Engineering Interest: A Literature Review

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The objectives of the study were to investigate the existence and strength of childhood play schemas (CPS) and eventual career choice in engineering. This will include CPS as an indication of the child's engineering interest or inclination and support around them.

An initial literature review will help to refine, focus and shape research questions going forward, as well as in developing theoretical and conceptual frameworks for identifying and nurturing engineering interest in children. The research has come from our observation of a repeated theme of play being identified as an early influence by learners, enrolled in the Bachelor of Engineering Technology (BEngTech) through the Independent Learner Pathway (ILP) programme at Otago Polytechnic.

A narrative literature review of published literature on childhood play, its implications and its link to engineering interest in children was conducted. A general debate and appraisal of previous related studies, rationale for future research and types of possible interventions were discussed.

Studies have shown that children do engage in engineering thinking during exploratory play with various materials and CPS. If teachers and parents can identify this interest, through the selection of CPS, they can create engaging activities and opportunities that will help children develop engineering interest and orient them towards engineering concepts. Researchers found that traditional approaches to studying Science, Technology, Engineering, the Arts and Mathematics (STEAM)-related interests in preschoolers misunderstood the complex ways families make sense of and engage with STEAM through play. An "engineering play" perspective has been proposed as a useful framework for understanding children's social constructive play and supporting STEAM learning. Furthermore, family-based engineering education programmes can foster engineering-related interests in both children and parents, with interest development conceptualized as a family-level systems phenomenon. These findings indicate the importance of play environments, teacher guidance, and family involvement in nurturing early engineering interests and skills in young children.

The insights of this review have drawn our attention to ways of supporting teachers, parents and caregivers in identifying a child's inclination and interests through the child's choice of CPS. There is a scope in using CPS in designing engineering related activities, experiences and language for children from an early age.

Mandatory Climate Risk Reporting: Insights from New Zealand Firms

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Climate change is one of the most significant challenges facing humanity today. Growing public concern has encouraged firms to disclose climate risk-related information. In response, many companies have adopted climate risk reporting, which helps enhance their reputation, improve employee morale, and support sustainable growth. In New Zealand, the Financial Sector (Climate-related Disclosures and Other Matters) Amendment Act 2021 introduced mandatory climate reporting obligations which were based on the disclosure standards set by the External Reporting Board (XRB). The aim is to provide investors with comprehensive information to make informed decisions about climate-related risks and opportunities within the entities and sectors in which they invest. This mandated reporting requires organizations to disclose their climate-related risks, including transition and physical risks, as well as their strategies for managing these risks. The Act, effective from January 2023, compels companies to act responsibly, reduce their environmental impact, and improve transparency and accountability.

Despite the extensive discussion of climate change in accounting literature, there is a lack of empirical evidence regarding the implementation of climate risk reporting regulations in New Zealand, primarily due to its early adoption stage. This study aims to examine the impact of climate risk disclosure on companies in New Zealand. To facilitate this, qualitative semi-structured interviews are conducted, allowing participants to describe their experiences in their own words. The data will be analysed using thematic analysis. The findings from this study can serve as a valuable resource for companies, providing them with a comprehensive understanding to foster innovation in addressing climate risk disclosures. Our results may aid regulators in evaluating the effectiveness of current legislation and determining if any revisions are needed. This will ultimately help New Zealand firms to meet national climate goals and global investor expectations, highlighting the importance of climate risk reporting for ensuring long-term financial stability.

Knowledge, attitudes, and practices of New Zealand council members regarding public playground development and accessibility for children with disabilities

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Unstructured or 'free play' can have a positive impact on a child's psychological, emotional, spiritual, social wellbeing and physical development. Playgrounds are an essential environment to achieve these developments. However, access to playgrounds for children with disabilities can be limited, often due to lack of understanding and knowledge from those involved in playground design. This study investigated the knowledge and practices of individuals responsible for planning public playgrounds in New Zealand, whilst identifying resources and barriers that influence design process. Members of all New Zealand councils were invited to participate in an online questionnaire exploring external involvement in design, existing and desired knowledge, perceived importance of playground elements, and barriers to accessibility. Twenty-nine participants reported public consultation occurred within the design process, and 27 involved specific external groups. Barriers to creating accessible playgrounds included finance, knowledge/awareness, challenges in providing suitable equipment and space. While individual council members believe they have the required knowledge to influence playground accessibility design, most feel that external contractors or other council groups would benefit from additional education. Further research should explore barriers to playground development, along with what are the targeted resources and education needs of the broader/external playground development team.

Applying a neurodiverse lens to our teaching: Is it possible?

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The diagnosis of neurodiversity is increasing. The educational settings therefore have a higher number of ākonga identified as neurodivergent. Within the academic settings, the success and failure of these ākonga depend on multiple variables. The kaiako (teacher) is one of the important variables. Initial Teacher Education (ITE) programmes prepare individuals to become teachers who will be competent in working with neurodiverse tamariki. A literature review was performed using the EBESCO database to explore the existing knowledge in this area. The search was limited to peer-reviewed articles published in the last twelve months (2023-2024). Three key words for research were Teacher Education, Neurodiverse and Early Childhood Education. In April 2024, the search found 203 articles, which were explored to understand the current trends. From an ecological theoretical perspective, the author examines publications contextually and globally to locate teacher education programmes in finding the kōrero around neurodiversity. The literature consists of studies where neurodiversity is often part of intersectionality. The globalisation and movement around diversity have impacted some areas of teacher education, although many of the curriculum areas are untouched concerning integrating and adapting concepts of neurodiversity. Most studies were around struggles and challenges whereas a few studies found celebrating the success stories. As an extension of the study, the author applied a reflective lens to understand the social awareness of success and failure. The reflective part of the study provokes thoughts for lecturers/teacher education professionals to think of and reflect on their teaching from a critical perspective.

Architecture of Aroha: Weaving Indigenous Knowledge and Cultural Sovereignty through Wahakura and Gietkka

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Architecture of Aroha is a collaborative project exploring Indigenous practices in Aotearoa, New Zealand, and Sápmi, involving a collaboration between Tanya White, Jasmine Te Hira, Gunvor Guttorm, Berit Kristine Andersen Guvsám and Inga Ravne Eira (poetry), curated by Zoe Black. Built around a dialogue between two Indigenous art forms that hold important cultural significance, the wahakura and the gietkka, baby sleeping vessels from the Māori and Sámi communities, respectively, the project was presented at Konsthallen Kulturens Hus as part of the 2024 Luleå Biennial, Sweden. While the gietkka has a long history, the wahakura is a relatively recent form. It does, however, draw on the enduring customary practice of raranga (weaving). Within both these Indigenous communities, the making of the baby sleeping vessel and its materiality is more than a craft, constituting a school of ancestral wisdom about care and love and the interconnected world that brings nature, the land, the makers, the families, the ancestors, and the extended community together. In Sámi, it is called duddjon (process of making), while in te ao Māori, it is raranga wahakura (weaving wahakura). The wahakura and gietkka are fundamentally relational art forms or architectures (and pedagogies) based on creative practices that connect makers with whenua/meahcci (land or place), on the one hand, and whakapapa/máddu (genealogy) and the future on the other.

The Biophilic Bug

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Aim: This paper explores the concept of biophilia—an inherent affinity for life and living systems—and seeks to identify the core principles of biophilic design that are being integrated into architectural practices.

Objectives: The study aims to elucidate key terminologies associated with biophilia, such as ‘restorative environmental design’ and ‘regenerative spaces’, and examine how these concepts contribute to re-establishing a harmonious relationship between human habitats and the natural world.

Rationale: In an era where architectural endeavours increasingly contribute to environmental degradation, this research critically reviews contributions from leading figures in the fields of biophilia, sustainability, ecology, and architecture. By analysing seminal works by Eric Fromm, Edward Wilson, Oliver Heath, Stephen Kellert, Sir David Attenborough, and Geoff Parks among others, this paper synthesizes a body of knowledge that underscores the urgency of integrating nature-centric designs in built environments.

Conclusion: While biophilia may appear as a contemporary discourse in architectural circles, its roots are deeply entrenched in human history. Revisiting this intrinsic connection could catalyse a significant shift in humanity’s approach to land use—from exploitation to restoration—thereby fostering rewilding efforts and promoting ecological stewardship (Kaitiakitanga).

Transnational higher education: Challenges and opportunities of teaching online during the COVID-19 time

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China tertiary institutions, driven by the state's aim for the public good and non-profit making, have been actively pursuing international education collaboration with overseas institutions. Over the past two decades, transnational higher education (TNHE) collaborations have evolved into various forms such as joint programmes, articulation agreements and branch campuses and so forth. My study reviews the policies, development, diverse motivations and practices of TNHE programmes between New Zealand and China. The COVID-19 pandemic that swept the world in early 2020 has a significant impact on TNHE that it not only has stopped academic staff and student mobility but also caused a sudden shift from face-to-face delivery to online teaching and learning which is a new experience for many students and teachers. This study investigates, from teachers' perspective, the teaching and learning challenges and opportunities of TNHE in a COVID-19 era that the participating institutions, academics and students are facing and its implications. The findings will provide recommendations for policymakers, teachers/scholars and advanced practitioners involved in TNHE programmes about what supports are necessary to be put in place from participating institutions for enhancing teaching and student learning outcomes in a post-COVID-19 era. Further research on TNHE and its trend is discussed.

From Surviving to Thriving: How Digitalisation Supports Retail SMEs

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This study explores the effects of digitalisation on small and medium-sized retail enterprises in Auckland, New Zealand. It focuses on three key variables: ICT adoption, digital literacy and technical resources and explores their impact on company resilience and revenue growth. The success and development of small retail companies have been a point of discussion, especially in the light of challenges to brick-and-mortar retail following COVID-19 and markets increasingly dominated by large national and international retailers. Various digitalisation tools have the potential to enhance the performance of small retailers if used effectively or waste scarce resources if applied without the right skills or not operationalised effectively. This study aims to collect empirical evidence of the impact of digitalisation on small retail companies in Auckland to provide a better understanding of factors that can either help or hinder the companies. The study employed a quantitative survey-based approach to gather primary data from retail SMEs in Auckland, New Zealand. The study collected survey data from sales representative, managers and owners of 88 different small and medium retail companies across Auckland, and used a Likert scale to measure ICT adoption, digital literacy, technical resources, resilience and revenue growth among retail SME. The results demonstrate that ICT adoption and digital literacy considerably contribute to company resilience and revenue growth, with ICT adoption having the most significant effect. While technical resources were crucial for revenue growth, the impact on company resilience was not significant. The study provides empirical evidence that digitalisation is critical for preparing retail SMEs for market disruptions and maintaining financial stability and enhances the understanding of the individual impact and relative usefulness of various aspects of digitalisation. It also provides guidance and recommendations for more targeted and meaningful investment in digitalisation for small retailers in Auckland and elsewhere.

From Shadow to Streets: The Rise of Chinese Cultural Visibility in Auckland

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This study explores the increasing visibility of Chinese culture in Auckland, particularly during events like the Moon Festival on Dominion Road. The research reflects on how this cultural visibility reflects a deeper need for belonging and social inclusion among Chinese people, an ethnic minority in New Zealand. Through a collaborative autoethnography, key organizers and community leaders, including the authors, will review and reflect on their personal journeys of promoting Chinese cultural visibility.

Using phenomenological methodology, the study also incorporates semi-structured interviews with event organizers and participants, aiming to gain insight into their motivations, experiences, and perceptions of cultural representation. By documenting these lived experiences, this research sheds light on the value of cultural visibility in fostering a collective sense of identity and recognition within New Zealand society.

The significance of this research lies in its potential to inform social policies aimed at promoting social equity and enhancing the well-being of ethnic communities. By understanding the importance of positive and healthy visibility for ethnic minorities, the findings can also contribute to improving cultural competence within social work practices. This study ultimately emphasizes the role of cultural visibility in advancing inclusivity and belonging in a multicultural context.

Mathematics teaching strategy for Graduate Diploma in Supply Chain and Shipping Management

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The study examines the mathematics focused course learning in the context of the Graduate Diploma in Supply Chain and Shipping Management at the New Zealand Maritime School. The aim of the research is to examine how to better engage and assist students to ensure their academic success and future employment performance within the Supply Chain sector. It explores the fundamental mathematics skills required, measuring whether embedding industry-focused mathematics could potentially enhance both overall academic achievement and subsequent job performance for students and graduates. Mathematical achievement is essential for students to be successfully working in the field of Supply Chain including Shipping Management. The hypothesis of this paper proposes that targeted mathematical curriculum designs before and after enrolment can be developed to improve academic and future employment outcomes by concentrating on industry- specific mathematics. In this study, an inclusive literature review was conducted to find further evidence of the importance of mastering the industry specified mathematics within Supply Chain and Shipping Management. Moreover, it identifies a range of the prerequisite mathematical skills that the students need to obtain from the programme administration document of the Graduate Diploma in Supply Chain and Shipping Management. Among the nine compulsory courses, most of the courses set the prerequisite mathematical skills, such as Logistics Practice and Trade Management in Shipping require introductory level of mathematical skills. Also, courses like Logistics Management and Network Systems are requiring absolute value, standard deviation, the square root rule, and algebra proficiency. Hence, the study recommends to set up a pre-test for evaluation of the mathematical readiness of the incoming students and advocates to develop a short course for students who failed to meet the prerequisite mathematical level but already enrolled to the programme to enhance their mathematical skills relevant to the Supply Chain and Shipping Management.

Walking Upstream in Kirikiriroa

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Walking Upstream is a live time-based event that invites audiences to listen and walk together along the edge of the mighty Waikato River in Kirikiriroa-Hamilton, Aotearoa, New Zealand. The soundscape, experienced through headphones, leads the audience from the city down to the riverbank; following the footsteps of many others who have walked against the current, they fall through time and the cosmos. Stories of the past, present, celestial and earthly life forms are evoked through an immersive poetic soundscape. This nomadic site-based performance calls attention to how we tune into and live with a river.

In this approach to walking performance, developed by Becca Wood, participants experience a choreoauratic space, where through sound they are guided, not only through the pathways and the anatomy of the landscape, and through contemporary and historic stories, but also in how they become immersed in their own anatomy as it meets the land, and how they experience their own bodies and their own stories as they collectively intersect with a landscape and its everyday inhabitants.

For the ITP Symposium, the presentation explores the possibility of presenting arts-based practice as an immersive and poetic experience that will give participants a feeling for this project using aspects of the technologies and practices. Participants will tune into excerpts of the original audio-score and site recordings, supported by images and somatic prompts that tell stories that are no longer visible, are disappearing or that were never visible to the human eye.

Serious Games: the use of custom playing cards in Materials Engineering education

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This creative practice will demonstrate the use of custom games cards in education. Two types of card will be demonstrated: Matching Definitions and Comparative Properties. A significant problem when teaching Materials Engineering is the very precise use of language that is used almost interchangeably in everyday life. Properties such as Strength, Hardness and Toughness have very different meanings in engineering, yet learners often associate hard, strong and tough as one and the same thing. In an attempt to use games to reinforce the connection between properties and their descriptions a set of Matching Definition cards was created. This has 19 pairs of playing cards, one with the name of the property and the other with the description, category and any applicable notes. These are linked to the materials selection software Granta Edupack for familiarity. The Comparative Properties pack is a “top Trumps” style game which allows learners to compare relative properties for a range of materials. Formative and Summative applications of the cards will be demonstrated and their suitability for use in the classroom environment. Due to limited class size no attempt at a quantitative analysis will be presented but learner experiences will be outlined. This is the second year of use of the property cards and they have been consistently well received by ākonga of various abilities and learning styles.

SUSS: Reimagining Gendered Social Constructs

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Disciplines: Fashion Design, Textile Design, Sculpture, Printmaking, Painting and Photography.

A curated exhibition of six female artists that discerningly investigate gendered social constructs from an intergenerational multidisciplinary perspective. The aim of this research is to engage with and critique traditional gender roles and social expectations to investigate the impact of social change to identity and rangatiratanga (self-determination) over time. This will be the third exhibition by this group of artists centred around the same theme.

This research embraces diverse methodologies, including applied and technological research, creative practice, and pedagogical inquiry, with contributions from artists specialising in a broad spectrum of expertise. The exhibition aims to foster a deep, reflective engagement with the audience, inviting them to consider the complex and dynamic nature of gendered social constructs that influence and shape our understanding of identity. By examining how gendered roles and social norms affect individual and collective identities and Te Ao Māori, Te Ao Pākehā and Te Ao Tuiwi worldviews.

There will be an A3 double sided catalogue with contextual statements. A mini essay to discuss the contextual framework that ties together each participating artists interdisciplinary contributions and their responses to the following research questions:

- How has the significance and consequences of gendered social constructs evolved over time influenced your creative practice?
- What can we infer about their future implications that shaped your creative work for exhibition?
- Through multiple exhibitions on this theme, what can be attributed to this change and/or evolution?

Myocardial Complexity, Apparent Fiber Density and Fixel Number within an Infarct

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Objective: To examine tissue structure within myocardial infarction using diffusion tensor imaging (DTI) and voxel-based analysis.

Context: Cardiomyocytes are longitudinal cells that also branch and connect with one another. At each position within the heart, these cells have a predominant direction referred to as the “fibre direction”. DTI is an MRI technique that can measure fibre direction, and also the presence of collagen structures. Myocardial infarction results in cardiomyocyte death and replacement fibrosis.

Voxel-based analysis of diffusion data yields the following metrics: fixel number (FN) indicates the number of fibre populations within a voxel; complexity (CX) indicates the spread of diffusion signal within a voxel; and apparent fibre density (AFD) reveals the density of each fibre population within a voxel.

Methods: Myocardial infarction was induced in healthy porcine hearts (n=5) by injecting microspheres into a coronary artery. After euthanasia, each heart underwent high-resolution contrast enhanced T1-weighted imaging and DTI. Infarct regions were manually segmented from the contrast-enhanced T1 images. Voxel-based analysis was performed using the Mtrix3 software package. Median values for each metric were compared between infarct and healthy regions using the non-parametric Wilcoxon rank sum test.

Results: Infarct regions showed contrast enhancement. Median FN was identical for infarct and healthy regions (FN=1). Median AFD was significantly larger in infarct compared with healthy regions ($P < 0.01$). CX was similar between infarct and healthy regions in all hearts.

Significance: Voxel-based analysis allowed for the comparison of infarct and healthy myocardial regions using FN, AFD and CX, which to our knowledge are novel measurements. AFD in the infarct region significantly increased. This may be indicative of fibre populations from healthy regions being funnelled into the smaller infarct region, leading to an increase in density. Alternatively, the AFD may be measuring properties of the aligned replacement collagen fibres in the infarct.

Coastal Processes/Hazards, Ecological Assessment and Construction: Hobsonville Seawall, Auckland, NZ

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The aim of the research investigations and design for this project at 18 Scott Rd, Hobsonville in Auckland, was to enable the construction of a large-scale coastal rock seawall for a new residential subdivision and coastal public walkway/cycleway. The site is exposed to both existing coastal erosion hazards and future threats from factors such as sea level rise, coastal inundation and tsunamis. This research considers the coastal processes, inner harbour erosion and inundation hazards, as well as an ecological assessment, the design of a rock revetment to mitigate the erosion and construction supervision to ensure compliance to design parameters. Since the property is possibly subject to inner harbour erosion and inundation, coastal protection measures are required to mitigate the erosion and inundation hazard.

The site geology is dominated by alluvial sediments of the Puketoka Formation of the Tauranga Group comprised of mixed pumiceous silts, clays and muddy sands containing beds of organic silt and peat. Level with the beach, there is a layer of dense pumiceous sand overlain by organic soils, including peat and relic tree forest debris. Geological maps of the Hobsonville area also depict extensive slope instability along this section of coastline. Historical aerial photographs and satellite images are available and were analysed from 1959 to 2017 from the Auckland Council (AC) database and Google Earth. The coastline at the project site appears to have eroded between 1959 and 1996 with the rate of erosion increasing from the south-western boundary corner (~10 m for rate of 270 mm/yr) to the south-eastern boundary corner (~20 m for rate of 540 mm/yr). From 1996, however, the shoreline 'accreted' through to 2017 with a maximum harbour-ward advancement of ~15 m (~710 mm/year) in the eastern corner and ~10 m (~480 mm/yr) in the western corner.

It is likely, that due to the erosional trend that occurred prior to 1996, coastal protection structures were constructed to halt the erosive trend. Further, it is likely that these coastal protection structures were backfilled, thus an 'accreting' shoreline. As the research has indicated an unstable shoreline a full coastal assessment was required for the proposed development.

Research and calculations were undertaken to determine the tide range, sea-level rise and wave run-up, extreme water levels and tsunami risk. The rock revetment was designed using the research findings to determine the appropriate rock size, required crest height and slope angle. The design was reviewed, approved and consented by Auckland Council, and construction supervision undertaken to ensure compliance with the design specifications. Medium to large basalt rock boulders were utilised from the Unitec re-development, and lab tested for compliance with the required parameters (i.e. size, density). The rock revetment has been installed, and the subdivision and walkway / cycleway completed and open to the public.

Skateboarding Provision in Aotearoa, New Zealand: A Case of Providing for Oneself

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Research Objective: In the wake of the sports Olympic inclusion in 2016, this study explored the various types of organisations that provide and what provision is available for skateboarding in Aotearoa, New Zealand (NZ).

Methods: Employing a social constructionist approach, this research used qualitative methods, including 25 in-depth interviews, documents and secondary data exploration. Data was collected between late 2018 and mid-2022, with participants from governmental sport bodies, roller sport governing bodies, skateboarding-related organisations and community groups.

Results and Discussion:

Since its 1970 introduction, NZ skateboarding has provided for itself. NZ skateboarding industry businesses, such as skateboard importers, niche-media publishers, event owners, skate shops, and skate schools, organise events, provide sponsorship, and encourage participation levels. Skatepark communities and social media groups provide the base for collective social and physical interaction, communication and coordination. Women skaters primarily drive women's skateboarding through social media groups and organised meetups. However, Regional and City Councils play a significant role by providing skateparks for all "wheeled sports", including skateboarding. As councils are considered difficult to deal with, several Regional Skateboarding Associations/Groups have been established to advocate for their skate communities regarding skatepark development and improvement.

In mid-2016, Skateboarding New Zealand (SBNZ) was established by a group of NZ skaters to respond to skateboarding's imminent Olympic inclusion. While SBNZ has struggled to develop a national structure of competitive skateboarding in NZ, it does support a few elite skaters. Consequently, like many informal sports, NZ skateboarding remains largely unorganised, unstructured, and ungoverned.

Significance: This research extends the existing literature knowledge by documenting the provision of skateboarding in the NZ context. It has further implications for governmental sport bodies and City Councils in allocating sport development funding policy in Aotearoa and overseas.

Puna Kōrero – Marae Based Creative Placemaking in the Wairaka Precinct

Leon Tan (Unitec)*; Tanya White (Unitec); Peeti Lamwilai (Unitec); Michael Craven (Unitec); Hohepa Renata (Unitec); Cris De Groot (Unitec); Emma Smith (Unitec); Allana Goldsmith (University of Auckland / Independent Musician)

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The current and former campus areas of Te Whare Wānanga o Wairaka (Unitec | Te Pūkenga) are undergoing massive change because of the Carrington Residential Development, an urban intensification project that will eventually account for tens of thousands of new residents and visitors in this area. Puna (pools, streams) nurture life in and around their flow paths, but they are also vulnerable to the negative consequences of the prevailing urban development paradigm. Many puna traverse the campus, connecting it with other parts of the Albert Eden local board area and beyond. Puna Kōrero is an applied and interdisciplinary research project which aims to improve the quality of relationships between people and this place, particularly its wāhi tapu, Te Wai Unuroa o Wairaka and Te Rangimārie Pā Harakeke. Developed over nine months, the project brought together marae and Creative Industries staff and students across three activity strands. The first involved a partnership with Te Kura Kaupapa Māori o Ngā Maungarongo, in which students attended a workshop at Te Noho Kotahitanga Marae, creating drawings in response to the visual narratives of the wharenuī. These drawings were then developed into animation sequences by Creative Industries students and staff for a light show. The second strand was a collaboration with Allana Goldsmith to launch a new puoro ataata (music video) Manaakitia, filmed entirely at Te Rangimārie Pā Harakeke and Te Noho Kotahitanga Marae. The third was the prototyping of a mobile app to share stories of six significant sites on the current and former campus areas of Unitec, inclusive of the marae and its wāhi tapu. All these strands came together as a Matariki event this year to celebrate the puna, the pā harakeke and our marae as the cultural heart of an evolving urban precinct. This poster presents the Puna Kōrero project as a case study of creative placemaking built on the values of Te Noho Kotahitanga (our institution's partnership framework), in which tangata whenua and tangata tiriti co-operated to engage local communities in a celebration of Māori language, music, art and culture at our marae.

Development of a hybrid optoelectronic radiation sensor

Marilou Raduban (Unitec)*; Pornnapha Mangthong (Nakhon Pathom Rajabhat University - NPRU); Michal Kohout (Institute of Physics of the Czech Academy of Sciences - FZU); Kota Hibino (Nagoya Institute of Technology - NIT); Yuki Maruyama (NIT); Zdeněk Hubička (FZU); Shingo Ono (NIT); Jiří Olejníček (FZU); Nattapon Srisittipokakun (NPRU); Jakrapong Kaewkhao (NPRU)

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Objective: Develop a hybrid radiation sensor that directly converts high-energy radiation to electrical signals.

Context: High-energy radiation (vacuum ultraviolet, x-rays, gamma rays, etc.) is conventionally detected using a material called a scintillator that absorbs this radiation and subsequently emits light. The emitted light is then converted into electrical signals by a separate photodetector. The properties of the incident radiation can be ascertained by analysing the electrical signals. The radiation sensor therefore consists of the scintillator (main sensing unit) and the photodetector. In this work, we develop a hybrid scintillator by coating the scintillator's surface with a semiconductor (titanium dioxide, TiO₂) thin film that serves as the photodetector that directly converts the light emitted by the scintillator to electrical signals, thereby eliminating the need for a separate photodetector.

Methods: TiO₂ film is coated onto the surface of the scintillator material using a direct current hollow cathode discharge plasma sputtering technique. Aluminum electrodes were then deposited on the surface of the TiO₂ film using magnetron sputtering to allow the current generated by the film upon absorbing the light emitted by the scintillator to be measured, thereby creating the hybrid scintillator. Detection of high-energy radiation was tested by irradiating the hybrid scintillator with a vacuum ultraviolet lamp operating at 160 nm (radiation source). The effect of heating during and after coating with TiO₂ was also investigated.

Results: The TiO₂ film is able to detect the light emission from the scintillator as in the presence of radiation, the current measured is about 4 orders of magnitude greater than the current measured without the radiation. This demonstrates the direct conversion of radiation to electrical signals by the hybrid scintillator. The performance of the sensor can be optimised by improving the crystallinity and optical quality of the film through heating during or after the coating process.

Significance: Development of this hybrid scintillator can lead to the integration of the scintillator material and photodetector into a single unit, leading to a more economical and miniaturised radiation sensor.

Visualizing Digital Research: A Comparative Analysis of Netnography and Social Media Data Analysis Techniques.

Michael Darby (NMIT)*

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The aim of this poster is to compare and contrast the digital data collection techniques of netnography and social media data analysis. Key differences in methods can be compared in terms of their data sources, analytical approaches and applications. By using the literature review method, this poster will provide a visual guide for researchers who may be considering using digital data methods and help them choose between netnography and social media data analysis to meet their research needs.

The rise of digital data has made netnography and social media analysis popular among researchers. However, choosing the appropriate method can be challenging due to overlapping features and different applications. The poster aims to clarify the distinctions and help researchers quickly understand when and how to use each method.

Methodology:

- Conduct a comparative literature review of netnography and social media data analysis.
- Create a visual comparison matrix that highlights key aspects such as data types, analytical techniques, strengths, limitations, and common applications.
- Use infographics to make the content accessible and engaging for a conference audience.

The poster will present a side-by-side comparison of the two methods, visually summarizing the key takeaways.

It will include decision trees or flowcharts to guide researchers in method selection.

The visual comparison will serve as a quick reference tool for researchers, particularly those new to digital research methods. It may be especially useful for business researchers, where access to settings can be limited. It can also be useful to research supervisors and have students where access to research settings is difficult. It can provide these supervisors with a tool to assess the efficacy and appropriateness of these two key methods.

Exploring Key Factors Influencing Construction Waste Generation in New Zealand Projects

Omer Altaf (Otago Polytechnic)*; Matias Kaufman (BECA); Firas Almughrabi (Otago Polytechnic); Priyanka Raina (Otago Polytechnic)

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Inefficiencies in paperwork, time management, rework, and design processes during the design and planning phases significantly impact construction projects, leading to increased waste and reduced project efficiency. This research will investigate how these factors contribute to waste, focusing on errors, omissions/lack of information and poor-quality documentation, delays in decision-making, lack of clear communications and design-related issues that affect overall project outcomes. Employing a mixed-methods approach, the study will combine primary data from surveys with construction professionals, project managers, and designers, alongside secondary data from industry reports and academic literature on construction waste and project management. The research will identify critical inefficiencies in the design and planning phases that lead to increased waste, such as inaccuracies in project documentation, extended approval times, lack of waste minimization considerations in the design phase and frequent design revisions. These inefficiencies are expected to cause cascading effects throughout the project lifecycle, including unnecessary material handling, rework, and delays. The study will also explore opportunities for improvement by examining enhanced documentation practices, better time management, and more effective design coordination. Additionally, it will investigate the benefits of adopting digital tools for accurate documentation, implementing more efficient scheduling techniques, and improving design-for-construction approaches to minimize rework. The primary goal of this research will be to streamline the design and planning phases, reduce waste, and enhance project efficiency, thereby contributing to more sustainable and cost-effective construction practices in New Zealand. This poster will mainly focus on Research gap and literature review with indication of expected outcomes.

External Funding for Beginners: An Interactive Session for Information and Inspiration

Paul Woodruffe (Unitec); Kristie Cameron (Unitec); Daisy Bentley-Gray (Unitec); Samantha Heath (Unitec); Brenda Massey (Unitec); Gregor Steinhorn (Unitec)

The process of applying for and managing a grant can be in equal parts exhilarating and frustrating. How do you find a grant to apply for? What is the process? How do you pitch your idea? And what are the challenges if you actually win one? Our presenters will share their stories. How they got started, how they presented their cases for funding, and, in some cases, how they picked themselves up when their applications were declined.

Presenter Biographies

Paul Woodruffe is a visual artist and multi-disciplinary designer and a Senior Lecturer in Creative Industries at Unitec. He's represented by Föenander Galleries in Mt Eden, Auckland, and has work in private and public collections in NZ, Europe, Australia, and the USA. Paul established the Piki Toi project as a partnership with Lifewise Trust in 2017 in response to problems identified in the publication "Inside the Cup", a document produced by Lifewise for Auckland Council on begging within the central city. Over the course of the project, Paul secured grants from multiple sources to progress the project.

Dr Kristie Cameron is an Associate Professor in animal behaviour, welfare and husbandry at Unitec. Kristie is an active researcher with experience in writing grant proposals and working with industry to apply theoretical principles to real-world problems. Kristie is also the convenor of the Unitec Early Career Researcher forum and a Co-chair of the Royal Society Te Apārangi Early Career Researcher Committee.

Daisy Bentley-Gray is a passionate advocate for Pacific education and research. She holds the position of Pacific representative on the Unitec Research Committee, Academic Committee, and Research Ethics Committee and leads the Unitec Pacific Research Fono, where she empowers and promotes Pacific research among Pacific staff. Daisy is a key researcher on an Ako Aotearoa funded project "Addressing Racial Equity & Justice in the Tech Sector for Pasifika learners in Aotearoa New Zealand".

Dr Samantha Heath is a Senior Lecturer in Nursing at the University of Waikato with a clinical background in children's nursing. She has focussed on the development of education for healthcare professionals through past clinical and academic roles and research interests in the UK and New Zealand. In 2021 Samantha was awarded a prestigious Whitinga Fellowship to investigate how the nursing curriculum might need to be adapted to accommodate New Zealand's ageing population.

Brenda Massey is a Senior Grants Advisor at Tūāpapa Rangahau, Unitec's Research and Enterprise Office. She helps staff seek and win external funding for research, as well as managing some of Unitec and MIT's internal grants schemes.

Gregor Steinhorn is Unitec's Research Partner - Enterprise. With a background in biotechnology, commercialisation and entrepreneurship he supports academics in engaging with industry, communities and government organisations. As part of this role Greg has helped with many grant applications and been involved in several research centres.

Pacific Symposium

December 2-3



Using fatele to support the preservation of Tuvaluan culture as it prepares to become the world's first digital nation

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"Fatele [...] have helped to guide, inspire and navigate me forward in my new-found home of Aotearoa. These kupu o fatele are like the whispers of my grandparents, reminding me to remain strong and hold tight to my culture."

This quote from Molia Alama-Tulafono in her book, *Kupu o Fatele*, links to the essence of the Tuvaluan value, *fenua*. Roth et al., (2024) defines *fenua* as the philosophy that the land, the ocean, the people, the language, culture, and knowledge, are in a spiritual and physical relationship. Molia, now living in Auckland, Aotearoa, shares fatele, traditional dancing songs, which she learned from her grandparents and elders growing up on Nukulaelae. Through this book, she purposefully aims to preserve and share fatele. Although fatele continues to play a significant cultural role (Talia, 2009), Molia perceives the youth in Tuvalu as less emotional about, and committed to, fatele as previous generations.

The preservation of fatele must be viewed against the climate change threat Tuvalu is facing. Tuvalu is one of two Pacific Ocean nation states under threat of disappearing as sea-levels rise (Farbotko, 2022; Roth et al., 2024). The plight of Tuvalu was raised at the Conference of the Parties of the UN Framework Convention on Climate Change (COP27) in 2022. In one of the keynote addresses, previous Tuvaluan Minister of Foreign Affairs, Simon Kofe, shared the vision of Tuvalu as the world's first digital nation. Kofe explained that the most precious assets of Tuvalu, among others, its culture, will be preserved in the cloud.

This autoethnography positions Molia's personal experiences against the threat, as well as opportunity, to protect Tuvaluan culture as the government prepares for its predicted disappearance. It investigates two questions: is the Tuvaluan diaspora already perpetuating the Tuvaluan culture, and does the notion of a digital diaspora support the Tuvaluan government's ideal to establish a digital nation?

Addressing Racial Equity and Justice in the Tech Sector for Pasifika learners in Aotearoa NZ

Marion Muliaumaseali'i; Daisy G Bentley-Gray (Unitec)*; Aki Te'evale (Unitec); Evangelia Papoutsaki (Unitec)

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This presentation is based on recent research that focuses on evaluating the effectiveness of IT programs delivered by Pasifika for Pasifika at bridging the gap of equality, fairness, and inclusion for the marginalized in the tech sector and addressing systemic racism to identify the potential for inclusive policies for STEM educators. Pacific peoples in NZ engaged in tech education, pathways, and careers represent an underwhelming minority of less than 3%. Although Pacific participation in tertiary education is increasing, success rates and those participating in the IT field continue to be a focus for improvement. Hence, multiple initiatives involving various agencies including government, education, community, and the private sector have been developed and aimed at improving Pacific participation and success in tertiary, and the Information Communication Technologies (ICT) sector to improve the livelihood of Pacific families and communities in NZ. Though some successes have been achieved, much more needs to be done to ensure more Pacific peoples engage and are successful in education and in the ICT space, including for instance a curriculum reflecting a diverse or inclusive lens, more adaptable postgraduate and micro-credential programs, industry certifications and continuous learning, and the use of advocacy and role models in these communities. The research, funded by Ako Aotearoa, used Pasifika methodologies and took place in the Auckland region.

Tamaitai Samoa: An Autoethnographic Analysis of Cultural Principles Contributing to the Wellbeing of Samoan Young Women in Aotearoa New Zealand

Flora Apulu-Feausiga (Unitec)*

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The aim of this study is to define and analyze historical and contemporary literature on the Samoan cultural principles of Sa (Sacred), Moa (Centre), and Va Tapuia (Sacred Relationships) and demonstrate how these principles contribute to the wellbeing of Tamaitai, Samoan young women, in Aotearoa New Zealand. Traditionally, Tamaitai held a revered status within Fa'a Samoa, embodying sacred connections between heaven and earth, and playing central roles in ceremonies and peacekeeping. This research draws on an autoethnographic approach, combining personal narratives with the examination of these cultural principles in relation to contemporary challenges faced by Samoan women in bicultural contexts. The methodology includes reflective self-analysis, interwoven with historical, cultural, and mythological literature that explains how the principles of Sa, Moa, and Va Tapuia manifest in the lives of Samoan young women today. The findings reveal that these cultural principles foster emotional, mental, and spiritual wellbeing by nurturing identity, relational harmony, and resilience in the face of societal pressures. Additionally, the research highlights the importance of maintaining cultural continuity and reclaiming sacredness to support wellbeing. This study has significant implications for educators, social workers, and policymakers working with Pacific communities, calling for culturally responsive approaches that affirm traditional Samoan values. It also serves as a foundation for future research into the wellbeing of Tamaitai in diasporic settings and the broader Pacific community.

Seasonal Employment Schemes and Wellbeing: Opportunity or pitfall for Pacific People

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Over the last three decades (1990-2023) season work schemes in countries such as Australia and Zealand have been an economic lure for Pacific People to earn money in niche employment markets that may not otherwise be filled by the local workforce. The agricultural sector and some light industries have benefited from these labour resource pools as too the workers who have participated in these schemes. While the mutual benefit has largely been economic, the often hidden social and domestic cost has not been clearly assessed or understood.

This paper seeks to better understand the impact that these schemes have and continue to have on family wellbeing, social wellbeing and culture. Using a case study approach with participants including seasonal workers and their families, employer hosts, regulators and scheme coordinators the study assesses the extend of the economic and social rewards and costs of these schemes and bring to the forefront the often non-monetary cost to those involved.

The findings suggest that the social cost may in some cases be higher than the economic reward to Pacific Island workers and their families and that a longitudinal perspective needs to be considered when deciding whether to participant or the extent of that participation.

The study is likely to be valuable to policymakers, RSE participants and community leaders.

Exploring the challenges that immigrant parents face in parenting their children in New Zealand

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This research investigates the challenges that immigrant parents face in parenting their children in New Zealand and the available support for immigrant parents. This research aims to explore the challenges that immigrant parents face in parenting their children in New Zealand. My two research questions are 1) What are the challenges that immigrant parents face in parenting their children in New Zealand? and 2) Are there parenting supports available for new immigrant parents in New Zealand? Literature revealed that the major challenges that immigrant parents face in parenting their children in New Zealand are cultural, language and communication and navigating New Zealand's system. The theory that underpins this research is the Ecological theory created by Bronfenbrenner because it recognises that multiple systems, including the immediate family, community, culture, and broader societal structures influence parenting. This research is qualitative research that employed the Talanoa Model as a methodology. Three face-to-face interviews were conducted with three professionals, a social worker and two parenting program coordinators. MIT Ethics Committee has approved this research project. The findings from the participants illustrated that the challenges that immigrant parents face in parenting their children in New Zealand are Adjusting to New Zealand's prevalent parenting practice, financial barriers, feelings of isolation and the lack of understanding and awareness. Participants also mentioned the importance of cultural awareness for professionals. The implication of this study includes the need for more research on minority immigrant communities to capture their need and challenges. The implication of this study on practice is the need for more culturally appropriate programs and professionals to be more culturally aware to support immigrant parents in their parenting journey.

The Significance of Transformative Praxis for Pasifika Phenomenal Educators and the Pursuit of Teaching Beyond Conventional Limits.

Krishan K Mani (MIT)*; Misa Fia Turner-Tupou (MIT); Naomi T Akulu-Haulangi (MIT)

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This research project is grounded in Pasifika worldviews within the context of Aotearoa New Zealand. The project is structured into three stages: (1) Exploration of the 10 habits outlined in the Kato Toolkit framework, (2) Identification of these habits, and (3) Examination of how these habits facilitate the success of Pasifika learners. The findings from the second and third stages will be analyzed and discussed. This project research team is led by Pacific for Pacific and aims to explore the lived realities of the Pasifika academic staff.

Specifically exploring how Pasifika academic staff might embody one or more of the 10 habits of phenomenal educators through their individual and collective talanoa. The participants of the research project are academics who have varied perspectives of Pacific worldviews given they have heterogenous Pacific Island nation backgrounds. The diversity of lenses provided multiple lens approach and thus added value. The findings have identified that MIT | Te Pūkenga Pasifika academic staff members who resonate with some of the 10 Habits have nuanced experiences that provided insight when self-identifying habits that form phenomenal educator praxis. The findings explained the pedagogical practices that educators employed to effectively support Pasifika learners. The success of Pasifika learners was assessed in conjunction with the thematic elements identified in the research. To excel as an educator, the study underscored the necessity of engaging in transformative praxis, transcending conventional teaching boundaries, adopting learner-centered and holistic methodologies, demonstrating patience and empathy, and committing to incremental, continuous improvement. Cultivating cultural competency is depicted as an ongoing, perpetual journey.

This research investigated the lived social realities of Pasifika MIT | Te Pūkenga staff, identifying effective pedagogical habits that exemplary educators should adopt to enhance student success. The research team employed a pragmatic methodology, integrating both indigenous Pasifika and Western worldviews.

Identifying Effective Pastoral Strategies for Pasifika learners' Success

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Pacific learners are a significant and growing group in New Zealand, crucial to the country's future prosperity. The New Zealand education system must support these learners to reach their full potential. However, current evidence indicates that more effort is needed to meet the goals of the Education Act 1989 and Te Whāriki. Despite some areas of excellence, there is a lack of consistent and widespread investment in high-quality teaching and learning necessary for all Pacific learners to succeed.

This research project aims to find solutions for effective pastoral care to help Pacific students complete their studies. It focuses on understanding pastoral strategies from Pasifika learners' perspectives to adopt a more Pacific-centered approach, improve learning experiences, reduce attrition rates, and enhance student success.

Two stages of phase one will be addressed.

- Stage 1: Defining pastoral care (student perspective)
- Stage 2: Identifying best practice models of pastoral care for Pasifika learners.

While exploring what pastoral care for Pasifika learners may involve, some important elements that has been identified are:

- Inclusivity: Creating an inclusive environment for Pasifika students.
- Cultural Respect: Understanding and respecting Pasifika cultures.
- Community Collaboration: Working with Pasifika families and communities.
- Staff Training: Providing professional development for staff.

Emphasizing the need for the education sector to recognize and address historical and structural inequities affecting Pasifika students, and to provide additional resources and support as necessary.

Talanoa as a research framework for culturally responsive pedagogy

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Purpose and context of the study: The project focuses on teachers' narratives of teaching and learning experiences with ethnically diverse akōnga in a tertiary education setting. It recognises the power of teaching in response to the ethnically diverse akōnga to achieve educational success.

As the population in New Zealand and world over becomes more diverse, teachers are challenged to incorporate inclusive pedagogies. This study explores different pedagogies of the teaching team at a tertiary institute and an early childhood centre in Auckland region. This presentation shares the narratives that participants communicated during talanoa.

Methodology: Authors draw on narrative methodology to deconstruct educators' experiences as early childhood educators. We focus on talanoa method to theorise and find answers. Talanoa was a part of our method to capture different stories and values of teaching and learning. Talanoa is about relationship between the process and the product of the research. The talanoa method helped us to analyse experiences, creating knowledge about diverse pedagogies. The presentation validates talanoa as a method to deeply understand multilayered and complex narratives shared by participants.

Talanoa as a research method has enabled us to creatively find representation in each letter.

An integrated approach was used through talanoa to understand different identities. Talanoa approach involved the concept of T/Talk, A/Awareness, L/Listening, A/ Authentic, N/ Narratives, O/One and A/Authority. So, it was about Talking, Listening and building relationships. These relationships were built on the basis of Authentic Narratives that included the worldview of One and all. Talanoa gave an opportunity and Authority to all to share their knowledge.

This research project hopes to add to the discourse of culturally inclusive pedagogy of care that is responsive to the needs of the community.

By Ākonga for Ākonga

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The 'By Ākonga for Ākonga' project, completed in early 2024, is a demonstration of the power culturally responsive practices have when designing and delivering student onboarding and connection initiatives.

The project centred on Māori, Pacific and Disabled and Neurodiverse perspectives, working alongside and empowering ākonga (students) to work together. The presentation for ITP Research Symposium will focus on the Pacific lens. The project utilised co-design processes that prioritised talanoa and Pacific values and principles around bringing ākonga on the project together to discuss, listen, share and explore how they as individuals and as a collective could develop resources for new students. Using bicultural practices elevated Te Tiriti o Waitangi principles– the Treaty of Waitangi, and the project was guided by the Te Pae Māhutonga model of wellbeing, which aligns with Māori, Pacific, and Disabled learners' perspectives.

The project also utilized both Māori and Pacific models of mentoring to foster confidence and connection among new students, thereby promoting a sense of belonging within the tertiary community. Recognizing the historical and ongoing inequities faced by Māori, Pacific, and Disabled learners in the New Zealand tertiary sector, the project prioritized these groups' voices. It ensured the development of resources that were 'by Māori for Māori', 'by Pacific for Pacific', and 'by Disabled for Disabled'.

The presentation will provide an overview of the resources required for the project, learnings, outcomes, and future plans, highlighting how insights were triangulated from data, research, and people.

Pre-stroke knowledge of the 'FAST' symbol among Senior Samoans and Tongan peoples

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Background: From statistical analysis over the past ten years captured by Te Whatu Ora Counties Manukau the incidence of early admission of Pasifika people suffering with stroke does not reflect the incidence of occurrence in the South Auckland Community. The incidence is also occurring much younger than in other groups of the population. Often admission is delayed and too late to advantage the Pasifika person from current interventions within the golden hours of 4.5 hrs – 6 hours for thrombolysis and clot retrieval. It is believed by the nurse specialist that there may be a language barrier to the FAST acronym publicly available for health promotion. What could be the case is that there is a language barrier which may prevent early intervention. There is also a belief that there is a lack of awareness of risk factors and early interventions for occurrences. These factors are supported by current literature, and cultural beliefs.

Research question: What is the pre-stroke knowledge of the 'FAST' symbol/word Stroke prevention promotion by the National Stroke Foundation among Senior Samoans and Tongans”?

Aim: (1) To ensure that Pacific peoples can maximise access for early intervention and treatment for stroke. (2) To increase awareness of the need for speed for intervention to prevent long term disability or early death among Pacific communities.

Participants: South Auckland Population - Voluntary participation – church groups Samoan and Tongan person 45 – 80 years.

Method: 59 Questionnaires received from both Tongan and Samoan groups. (Translation required into Tongan and Samoan) Followed by 2 focus groups so far (Samoan).

Early findings: Lack of awareness of the stroke FAST symbol. Eager to learn and understand the symptoms and early intervention to prevent disability or early death. Eager to understand risk factors and how to prevent stroke occurring.

Other: the importance of having Pacific people with stature in their communities on the team for the success of the research.

Exploring the support system for the carers of the Pacific older adults

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This research draws some initial findings from a research project in partnership with Toa (Treasured Older Adults) Pacific Incorporated. Toa Pacific recognises the need for a program and workshops to support Carers in their important work for the Pasifika community. Toa Pacific Inc. has invited the academic staff of the Social Work and Sport School to conduct research on the needs of Pasifika senior caregivers. This will enable Toa Pacific and other elderly care agencies to provide improved support to these caregivers. Carers have always been considered an important part of the lives of Pacific Older People. Carers support the older adults, such as personal care, household support, etc. A carer could be a family member, a relative, or someone employed externally. However, the focus of care has always been on the well-being of the older adults, not on the carers' well-being. Educating Carers to Self-identify when needing emotional, mental, financial, and physical support is paramount so older Carers can continue to care. The project aims to explore the following 3 questions. 1. What are the most common needs of carers when caring for Pasifika older adults? 2 Are there any contributing factors that impact the care for Pasifika older adults? What are they? 3. What supports are available for carers of Pasifika older adults? The CEO of Toa Pacific Inc, will send the invitation to carers who are already known and registered with Toa Pacific Inc. Participants will be selected by Toa Pacific anonymously. Thirty carers will be involved in this project. The methodological approach is Talanoa, which involves various data collection methods such as talatalanoa (preparatory exchanges), talanoa faikaava (focus groups), talanoa faka'eke'eke (interviewing), and taalanga (interactive dialogue). The implications will show the support that the carers needs and how Toa Pacifica Inc. can provide an effective services system for the carers.

Cultivating Resilience

Rahul Chand (Unitec)*

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Climate change in the Pacific region threatens the livelihoods of its people as the effects and consequences diminish one of the basic needs for human survival; food and nutrition. Loss of food cultivation and global economics supplementing primarily with a supply of lesser nutritional options affect people's health. Current efforts to alleviate the issue are lacking, and there is no progress whilst the challenges escalate. The project will seek to provide a dedicated facility for researching adaptive crop sources to the changing climate and creating education and awareness about how these adaptations are necessary for Pacific food security and, ultimately, generational survival on the islands.

Architecture and food have always complimented each other in creating spaces in our homes and cities, resulting in gastronomic experiences by design. Active, immersive and experiential learning will be vital in distributing the innovations to community levels. Studying the typology of research centres and culinary and gastronomy institutes and using morphological analysis will be the primary methodology for the project. Acknowledging the Pacific worldview on creating built spaces and integrating traditional Pacific knowledge in learning and food science will be critical for success. The project will be based in Auckland New Zealand as it can provide better objective outcome in light of the limitations faced by sites in the Pacific.

Embedding Pacific Content: A Pathway to Improved Student Engagement

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This study highlights the pivotal role of the student-teacher relationship in fulfilling the core mission of the institution. However, recent surveys have shown a decline in satisfaction with this partnership, leading to a reluctance among students to recommend the institution as a place of study. Issues related to classroom practice, curriculum, and assessment are frequently cited in Net Promoter Score summaries as contributing factors to this decline. Classroom practices and curriculum content constitute the primary elements with which learners engage during their educational experience. The extent of students' engagement and participation in course materials and activities significantly impacts their learning. This presentation aims to discuss how embedding Pacific content in courses and teaching approaches affects learner engagement and participation.

Pacific content encompasses cultural knowledge, experiences, and practices that promote culturally inclusive teaching. According to Chu et al. (2013), collaborative curriculum development incorporating Pacific content and inclusive pedagogies enhances student engagement and increases the visibility of Pacific cultures within educational institutions. This study encourages the institution and teaching staff to incorporate Pacific content and teaching methods into their practices.

A survey was conducted among teachers who had integrated Pacific content into their teaching practices. The results indicate that embedding Pacific content significantly improves learner engagement and participation. This underscores the importance of culturally relevant and meaningful content in enhancing learning experiences. Engaged learners are more motivated, invested in the subject matter, and take ownership of their learning.

Make A Statement: Family Violence and Pasifika in South Auckland

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This research is about family violence and Pasifika community in South Auckland. The aim of the research is to explore why family violence escalates in South Auckland. The 3 research questions are: 1) What are some common contributing factors that cause family violence within our Pasifika community? 2) What are the short-term and long-term effects of family violence? 3) What strategies need to be implemented by the government, including statutory departments and community social services for our community's safety? The government has implemented the Family Violence Act 2018 to stop and prevent violence by making sure that any form of violence is unacceptable. The theory that underpins the research is the Fono Fale model by Fuimaono Carl Pulotu Endemann. It is a Samoan conceptual model that represents the holistic and interconnected nature of Pasifika's well-being. This comprehensive approach helps to identify culturally relevant strategies for intervention, prevention, and support. Talanoa is the relevant methodology for this research. It is normal within our Pacific Communities that we use Talanoa within our personal and professional space. Contributing factors has taken back Pasifika to migration, less education, lost identity, addictions, and family dynamics. The government has also extended a national strategy (Te Ao Rerekura) to work collaboratively with the communities. Findings from this research show that there is a socio-economic implication relevant to contributing factors causing family violence. There is also a practical implication that needs to be done for the community to develop a sustainable outcome within our family settings. For the future, more research should be done on this topic as part of this practical implication.

Empowering Māori and Pacific Learners: Success through SPECCASS Initiatives

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Student representation is essential for priority groups Māori and Pacific Islands. The development of SPECCASS at Unitec emphasizes the importance of networking and delivering initiatives (social, spiritual, cultural, and academic) by and for the students with staff support. This presentation examines initiatives that require active engagement within schools and among priority learners. It highlights the collaborative efforts between students and staff to foster an inclusive environment that supports the holistic development of Māori and Pacific Island students. The findings aim to inform future strategies for enhancing student representation and success in higher education.

Vagahau Niue: Sustaining a Realm Nation Language through Tertiary Education

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Vagahau Niue, an endangered language, is one of the three realm languages requiring urgent preservation efforts. Responding to the Niue community's call to address the decline in language speakers, the NZ Certificate in Pacific Languages (Level 3) (Vagahau Niue) was introduced, focusing on conversational and cultural understanding. This presentation examines the demographics of course participants and explores how and where they could apply the skills and content learned in various contexts. It underscores the critical role of educational institutions in safeguarding Vagahau Niue and promoting its linguistic and cultural heritage.

Inspiring students leads to success of Pacific students' Industry project in the Bachelor Applied Technology (BAT) at Unitec Institute of Technology

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The BAT programme at Unitec is the only programme in the tertiary framework in NZ and the Pacific. The Industry project is a research course in this programme. This Paper presents a lecturer's Pacific experiences and how it had inspired the success of Pacific students' research topics based on their countries: Fiji, Samoa, Tonga, Tuvalu, Vanuatu, PNG. Success is measured by completing the industry project and graduating with the BAT certificate. Success is also in the implementation of the student's projects in their specific countries. When the lecturer allows Pacific students to base their project research on their own countries it creates a meaningful learning application and experience for Pacific students. In the research process, students consulted with the government departments and the private sector. Consequently, government departments and private enterprise supported and implemented the project initiatives by Unitec Pacific students.

Intersections of faith and abuse. A study of Samoan Social Work practitioners insights into family violence

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This presentation examines the dynamics of biblical interpretation in relation to family violence, seeking insights from practitioners in the Samoan community in Aotearoa, NZ. It draws on a master's research project investigating the intersection of biblical texts, family violence, and cultural dynamics within the Samoan community in Aotearoa. Focusing on the experiences of social work practitioners working in the field of family violence, the research sheds light on the use of biblical text by abusers to influence and perpetrate violence over their victims. In this context, the victims being addressed, who are Samoan women, are often manipulated into believing that the resolution of conflicts lies solely within the confines of the relationship as dictated by passages found in the bible. The presentation delves into practitioners' perspectives on navigating this complex dynamic, examining their strategies for supporting victims and challenging harmful interpretations of biblical texts. Utilising the qualitative method of face-to-face Talanoa with Samoan social workers working in the field of family violence, early findings would suggest a cultural disconnection within the affected families. Therefore, culturally tailored frameworks for addressing this issue are recommended. Such an approach would speak to and assist in reinterpreting clients' understandings of biblical teachings and the sources from which they derive these interpretations. By amplifying practitioners' voices and illuminating the impact of religious beliefs on experiences of family violence, this research seeks to contribute to enhanced awareness and culturally sensitive interpretations in addressing intimate partner violence within the Samoan community of New Zealand.

Decolonising play

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This abstract presents an under-graduate student's research by design project on decolonisation through play. Play is freely chosen and personally directed and it is a way for children to understand the world and themselves. Decolonisation doesn't start at the design table but rather with the mind of the individual. There is potential, therefore, to use play to unlearn what has been taught, to decolonise minds, which in turn could change the future of our urban spaces. Due to the Niuean heritage of the researcher it was decided to examine colonisation and decolonisation through a Pacific lens, and also through the universality of play. After defining key terms and issues, case studies are presented and critiqued based on a set of criteria informed by literature review and refined by the author. Following this, an existing, and somewhat neglected, park in Manukau, Auckland is proposed for retrofitting as a decolonised play space that is based on Niuean traditional play while also remaining and open to interpretive use and enjoyment. The intent with the design is to embrace the interconnections of nature, culture and youth to invoke essence and spirit through the universal and innate activity of play. Authenticity of design is the aim and the iterations of this process will be presented as drawings inspired by games that have been revived due to conversations with the author's family. The presentation concludes with reflections on how decolonisation of play spaces might change the outlook of those using them and bring a greater closeness to nature and cultural understanding.

Virtual Symposium

December 4



How to retain students? Findings from a student attrition study in NorthTec

Angie Dang (NorthTec)*

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Aims/Objective: This presentation provides insights into what NorthTec have been doing and what could be done better to retain students.

Content: Student retention is important for many tertiary education providers in New Zealand. This is because students pay tuition fees and bring a major source of income needed for institutions to operate and sustain courses offered. This presentation contributes to the literature of student retention by examining what NorthTec have been doing to retain students and influencing factors. The findings are useful for education providers in this region and elsewhere with similar settings.

Method: This is the second phase of the student attrition study which collected qualitative data using semi-structured interviews with leadership and staff members of NorthTec. Invitations were sent via formal email channels and five people responded. The interviewees worked in diverse positions and pathways and across different campuses of the institution. Qualitative data are analysed using thematic analysis, word analysis, and discourse analysis to find out student retention measures taken by NorthTec. The analysis employs retention theories to explain how these retention measures work to retain students. The findings are then compared and contrasted to findings from phase 1 of the study which looked at data from institutional records and an online questionnaire targeting students who withdrew or cancelled studies with NorthTec.

Results: Responses share a common understanding about what NorthTec have been doing to retain students. However, they have diverse perspectives on how well these actions work towards retaining students, existing constraints, and contributing factors. Responses also identify areas that need strengthening, and possible ways forwards. Part of retention theories have proven to be applicable to generate insights into these findings.

Is The Gap between Technology and Management Practice Dangerously Widening?

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Aim: To investigate whether synchronisation between technology and management losing traction. Is the gap between the two widening? This could create due diligence issues lowering ethical values in management and over-leveraging on technology

Methodology: The investigation relies on case study research through secondary sources to validate the research. Since the research concerns the global business environment, the scope of the research covers case studies from around the world. Empirical evidence is a good way to validate secondary research.

Context: The management role is irreplaceable by the artificial arm of technology. The world could constantly be under the threat of stagflation, wars, and terrorism on a gigantic scale. Relying only on technology to manage an organisation could be a strategic blunder. Since NZ's economy is integrated with the Global economy, its impact on New Zealand businesses and NZ society could be significant.

Case study examples:

- The Challenger disaster in 1986 killing 6 astronauts was due to a lack of strong and decisive leadership.
- The BP oil leak off the Gulf of Mexico in 2010 killed 11 people. The cost was attributed to unrealistic cost-cutting decisions, inadequate internal controls, and too much reliance on technicalities.
- The Pike River tragedy in New Zealand in 2010 killed 29 men. The cause was attributed to management's pressure to focus on technical aspects of increasing coal production.
- The Titan submersible implosion in 2023 killed five occupants. The cause was attributed to reliance on technicalities and intentionally flouting management's leadership and ethics aspects.

Results: the findings will be related to key literature indicating management concepts of ethics, social responsibility, leadership, and decision-making. Recommendations will be made, which managers and researchers can use to improve both practice and further investigation respectively.

Evidence for continuing competence and professional development requirements for Aotearoa midwives: Insights from a literature review

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Context. Registered health professionals in Aotearoa are required to take part in competence assurance and professional development processes. For midwives, one aspect of this is the Midwifery Standards Review (MSR). The MSR contains several elements including self-reflection in relation to midwifery practice and guiding frameworks, reflection on whānau/consumer feedback, reflection on statistics/outcomes, evidence of engagement in recertification requirements, and reflection on goals from previous professional development plans (PDP). The New Zealand College of Midwives |Te Kāreti o Ngā Kaiwhakawhānau initiated a process to review the MSR, which included undertaking a literature review.

Objective. The literature review objective was to explore the broad evidence related to the required elements of the MSR, and the impact of those elements on improved professional practice and health outcomes. Evidence was sought relating to the following aspects: a review meeting with a formal reviewer, involvement of consumers in the review process, cultural safety, continuing professional education, reflective practice, and incorporation of consumer/whānau feedback.

Method. A wide-ranging search of peer-reviewed and grey literature was undertaken using several databases (CINAHL, Medline, PubMed, Google Scholar, and Cochrane), as well as websites of the regulatory and professional bodies of other regulated health professions. The literature was reviewed to ascertain whether evidence supported the inclusion of the current elements of the MSR in turn, and additional elements that might be supported by the literature were outlined.

Findings. Regarding the inclusion of elements in a competence assurance and professional development programme, in some areas evidence was scarce. There was evidence that consumer feedback, considering actual outcomes against expected, continuing education, and reflective practice may have a positive impact on professional practice, and in some cases, health outcomes. There was a clear call for the ongoing and increased role of whānau/consumers in the evaluation of health services in Aotearoa.

Cadmium, lead and nickel pollutants in Hawke's Bay vegetables

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Heavy metals such as cadmium, lead, and nickel have become ubiquitous in the environment and accumulate in plants, animals, water and human food. Human exposure through the consumption of vegetable crops is a global concern, and risk is increased following flooding. This study aimed to investigate heavy metal concentrations in vegetable samples in Hawke's Bay, New Zealand one year post Severe Tropical Cyclone Gabrielle. Organic and non-organic vegetables were included and sites impacted and not-impacted by cyclone flooding. In total 736 vegetable samples were combined to form 153 representative samples collected from 14 markets grown at 10 growing sites. Samples were analysed by ICP-MS in an ISO 17025 accredited laboratory. Cadmium ($p=0.003$) and nickel ($p<0.001$) contamination were higher in non-organic vegetables. Growing vegetables on flood affected land was independently associated with reduced cadmium ($p=0.030$) and nickel (0.024) contamination. Three samples exceeded WHO lead maximum permissible levels (0.1 mg kg^{-1} fresh weight), and one sample exceeded WHO cadmium maximum permissible levels (0.05 mg kg^{-1} fresh weight in Brassica). This study suggests that Hawkes Bay vegetables by global standards are generally low risk for heavy metal toxicity and organic vegetables carry the lowest risk. However, some vegetables do exceed maximum permissible limits for lead and cadmium. We suggest that recent Severe Tropical Cyclone Gabrielle did not increase risk and may have paradoxically reduced risk of heavy metal toxicity from vegetable consumption.

The use of digital tools for learning by neurotypical and neurodiverse animal science students

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Digital tools are ubiquitous; therefore, outcomes in education depend on how educators and students use these technologies in teaching and learning. The purpose of this study was to assess the engagement of Unitec Institute of Technology, New Zealand students with digital tools in their personal lives and for study. This assessment aims to better assist educators in utilising these tools to enhance the learning experience for both neurotypical students and those who consider themselves neurodiverse in the animal science field.

Sixty-nine students enrolled in environmental and animal science programmes across three education levels—Level 5 New Zealand Certificate in Animal Technology, Level 6 Bachelor of Applied Science, Level 6 Diploma in Veterinary Nursing, and Level 7 Bachelor's in Veterinary Nursing—completed a short survey on their preference and use of digital tools such as Chatbot GPT, Microsoft products, Echo360, Facebook, Instagram, Google products, Kahoot, among others.

The study highlighted the importance of using a multi-modal design. Educators need to teach students, particularly those who consider themselves neurodiverse, how to use technology effectively. They should be aware of their student's needs and plan to teach using a limited range of directed digital tools to ensure an effective, safe, and achievable learning experience for individuals learning to work with animals.

Bridging the Gap: The Impact of Agents on Chinese Students in New Zealand

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This presentation draws on data from recently completed PhD research examining the relationship between Chinese tertiary students' pre-arrival expectations and post-study experiences in New Zealand. Qualitative method was employed in the main research, which included a pilot study involving five semi-structured, one-on-one interviews. The interview questions were designed to explore three aspects of Chinese students' study journeys in New Zealand: motives and expectations, employment seeking and workplace communication, and their migratory endeavours and outcomes in New Zealand.

An interesting sub-theme that emerged from the pilot study was the significant role that education agents played in Chinese students' decision-making processes, which impacted their entire trajectory in New Zealand. This prompted further investigation in the main study, focusing on whether students were associated with an agent when applying to study in New Zealand, rationales for using or not using an agent, and the met or unmet expectations in their interactions with agents. The presentation concludes by offering evidence-based recommendations for providers' engagement strategies when working with agents to recruit students from China.

Faith and Resilience in Nursing

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There has been concern for many years about the wellbeing of nurses, as there are many reports of high levels of stress, compassion fatigue, moral distress, and nurses leaving the profession. The crisis of the COVID-19 pandemic has intensified the reports of burnout and staff turnover. Religious practices have long been recognised as coping techniques, and there has been an increased emphasis placed on nurses taking time to promote resilience.

The aim of this narrative literature review was to describe available peer-reviewed literature regarding links between faith or religion and resilience in nursing and to provide recommendations for future research. Primary research articles from the last five years were included. Exclusion criteria was where religion was recorded only as demographic data, or research with undergraduate nursing students, or not published in English.

Many of the studies were quantitative- describing turning to religion or praying or meditating as a coping strategy. They were from many disparate cultures, but not all indicated which religion/s. Results broadly indicate that religion is used as one of many coping strategies for nurses but at differing levels of significance. Qualitative studies added some further depth to the discussion.

Further avenues for research would be to indicate differences between religion and the cultural contexts, and to conduct more interventional studies. Further research from the New Zealand and Australian context using similar tools would add value to the overall picture. The implication is that nurses need to be able to utilise all available sources of support that can help them to increase their resilience and wellbeing, and that this should be supported by nursing professional organisations.

Surfer Nature Connection

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The lived surf experience has shared significance in surfer lives of a cohort of long-term leisure orientated surfers, who surf in Murihiku Southland, Aotearoa New Zealand. Being a surfer is central to the long-term surfer self. While the specifics of the surf experience are difficult to isolate and present more as a gestalt or wholeness, it is clear that the experiences of surfing are not only about standing on a board and catching a wave (although that's a big part), but it is also about the experiencing and evolving self, nature and place, meanings and understandings of the experience, and it is about connecting, belonging and flourishing.

This paper presents one aspect (the nature aspect) of a larger study based on the shared essential experiences and common essential meanings of the lived surfing experience. The larger study is part of a research project at Te Whare Wānanga o Awanuiārangi. The intention of the study was to seek what it is about surfing that returns the surfer to the ocean to surf, year after year, for 20 years, for 50 years, with such desire and enduring intensity. The study uses a phenomenological research approach.

This presentation will look briefly at one aspect of the larger study, the surfer nature connection.

Are Our Institutes of Technology Ready for Industry 6.0?

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Industry 6.0 is generally seen as incorporating the latest technologies like Artificial Intelligence (AI), Internet of Things (IoT), nanotechnology, and quantum computing while maintaining ethical and sustainable industrial practice as in Industry 5.0 as well as keeping the idea of mass customization and production driven by high quality and live data. The research aim of this presentation is to discuss how our institutes can prepare to teach in this area with hands-on projects and internships around real-world problems and solutions in a computing laboratory environment. The two research and expository approaches are: an academic literature review, and the authors' own reflective practice. Google Scholar shows many papers in the area of teaching industry 4.0 and 5.0 (which are the current paradigms) but very few papers discussing or speculating on teaching industry 6.0. However, based on a broader review, the findings indicate that these projects will be team-based, with students from diverse backgrounds and even multiple schools to foster creativity. The teaching staff will also learn from national and international experts. Online and virtual teaching technologies will also be considered for supporting face-to-face delivery and for delivery under any future emergency circumstances.

The presentation goes on to cover other specific findings and ideas. The Eastern Institute of Technology has made progress as part of its Intelligent Systems track in the Bachelor of Computing Systems. It continues to accumulate expertise and industrial automation related equipment and robots. In addition to practical and engaging learning, developing industry skills and local industry collaboration has resulted. Based on the authors' reflective practice, the plans for the future include work on the 3D-Robot and expanding the setup with additional Fischertechnik models. This could also open the possibility for a digital twin by mapping an actual physical factory in the lab and using artificial intelligence models on top. This involves multiple machines all working together to simulate an actual production line in partnership with local companies. The intention is to collaborate and evaluate the teaching delivery qualitatively with the help of regional industry representatives at the end of the internships and projects. In conclusion, this presentation is one of the many reviews and reflections within a long journey to help guide the future of teaching industrial computing.

Comparative Analysis of Motivational Factors to Increase the Selection of a Career in the Nursing Profession

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What motivates people to choose nursing as a career? What are the motivational influences and circumstances that lead to the discovery and selection of Nursing as an enduring and sustainable career choice? Can these ingredients be identified and how can they be used as a recipe to grow professional nursing?

Presently an additional 5.9 million new nurses are needed to support the current 27.9 million nurses working globally. Furthermore, projections expect a further 36 million nurses will be required by 2030. Enormous demand, and rapidly increasing gap in between supply and demand for professional nurses is driven by overlapping influences, such as the higher incidence of chronic conditions associated the ageing population, growing appetite for community centric health care delivery models, and growth in chronic disease.

A constructivist grounded theory methodology with semi structured interviews will be used to unlock knowledge of the specific circumstances, motivators, influences and considerations that are unique and lead to the selection of a Nursing career pathway. Applied psychological theories in motivation, principally social cognitive career theory forms the basis to uncover the conditions and incentives influencing the selection or rejection of nursing as a career pathway. This identification process enables the evaluation of specific and unique influences and motivations, supporting consequent behaviours and career decisions. The insights gained from this research can shed light on the obstacles and enabling influences that directly impact the growth of capability for the nursing profession.

In its infancy, this study and subsequent analysis will also be compared with previous work in the engineering field to validate findings, uncover parallels, dissimilarities and nuances in the learning journeys associated with either professional career pathways. This presentation discusses reviewed literature and approach to this investigative study.

Using data from the New Zealand Health Survey to identify health promotion opportunities for lesbian, gay and bisexual people

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Health inequity for sexual minority (lesbian, gay and bisexual) people compared with heterosexual people is well documented globally. However, limited local data have been used to inform health policy and practice. This project analyses data from the New Zealand Health Survey to determine areas of inequity in health behaviours and identify opportunities for health promotion action. Pooled data from six waves of the New Zealand Health Survey (from 2015/2016 to 2020/2021) were used. The sample for analysis comprised 67,440 people aged 15 years and older, including 1,224 sexual minority females and 703 sexual minority males. We applied multiple logistic regression to investigate the association between health behaviours and sexual identity. Sexual minority people were found to have poorer health behaviours in comparison to heterosexual people in relation to alcohol consumption, smoking, drug use, physical activity and nutrition (eating fruit and vegetables). For example, compared to heterosexual females, female minority, heterosexual males, male minority people were more likely to be binge drinkers, as well as being less likely to meet fruit and vegetable consumption guidelines. In relation to physical activity, male minority people were less likely, and female minority people more likely to meet the guidelines. Our results are broadly consistent with the current literature demonstrating health inequity for sexual minorities compared with heterosexual people in relation to alcohol consumption, smoking, drug use, physical activity and eating fruit and vegetables. Health promotion agencies have an ethical and moral responsibility to address these areas of inequity. Opportunities exist in Aotearoa New Zealand to improve the health behaviours of sexual minorities, and health promotion agencies should ensure their interventions address the needs of these groups.

Domains and attributes of cultural competency among healthcare providers caring for vulnerable clients: An integrative review

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Attaining cultural competence is essential as it guarantees that healthcare services are patient-centred, respectful, and responsive to diverse patient needs. This becomes more essential when tailoring healthcare services to meet the unique needs of individuals who may face social, economic, or health disparities. However, little is known as to the attributes of cultural competency among healthcare providers caring for vulnerable clients. This integrative review was carried out to extract the domains and attributes of cultural competency among healthcare providers caring for vulnerable clients from theoretical and empirical papers. A search strategy was developed using Embase, Scopus, Web of Science, CINAHL, and PubMed research databases using keywords: nurse(s) (ing), international, cultural competence, diversity, and acculturation. A total of 493 articles were uploaded to an online review data management, Covidence. For final analysis, 58 studies were considered. The final articles were evaluated using a 6-scale Authority, Accuracy, Coverage, Objectivity, Date, Significance or AACODS checklist (Tyndall, James, 2010) and 0-100% scoring Mixed Methods Appraisal Tool or MMAT (Pluye et al., 2009) for theoretical and empirical papers, respectively. Five major domains (i.e., culture, team, patient, action, and self) and three major attributes have been identified based on the review: 1) Cultural (knowledge of culture, knowledge of team, knowledge of patient, knowledge of challenges, and knowledge of one's self); 2) Competence (skills for understanding culture, skills for collaboration, skills for communication, skills for practice transformation, skills for self-awareness); and 3) Care (culture-driven values, team-driven values, client-driven values, action-driven values, and self-driven values). These findings provide valuable insights into improving care for vulnerable populations through cultural competency. By prioritising these attributes, healthcare systems can enhance patient-centred care and effectively address health disparities among diverse communities.

Impact of Airbnb on rental affordability in selected New Zealand cities

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Short-term property rental provided by Airbnb platform has caused disruption in the long-term residential rental market. Accompanying with the emergence of the Airbnb the questions raised in global context: how does Airbnb affect long-term residential rental market? What are the level and extent of Airbnb's influence?

There are a few researches of the overseas market. However, research in New Zealand context is a blank area to date. To fill the knowledge gap, the author examined four main New Zealand cities (Auckland, Wellington, Christchurch and Queenstown), which are with the most severe rental affordability crisis and majority of the Airbnb list.

Supported by the statistical techniques, cross-sectional analysis and longitudinal analysis were processed. This study finds Airbnb deteriorates rental affordability by pushing up the long-term market's mean rent and relocating property to short-term rental market.

Having identified the existence of the negative impact, the study also finds Airbnb's impact varies from city to city. Queenstown has the most severe impact imposed by Airbnb activity, follows by Wellington, Christchurch and Auckland.

Meanwhile, seasonality affects Airbnb's impact. During the research period, Christchurch and Queenstown's rental affordability dropped with the arrival of the winter season. While Auckland and Wellington's rental affordability improved in winter.

Because Airbnb has negative impact on the rental affordability at the four cities, to ease the rental affordability crisis, besides the current resource consent requirement and commercial rate, the author recommended other solutions to reduce the Airbnb property supply accompanying with the rent control.

Relationship between the moment-arm distance of the human patella tendon and maximum torque production at high velocity

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While a strong correlate of maximal joint torque is muscle size, the influence of moment arm distance on joint torque is less clear. Moment-arm distance (MA), the perpendicular distance from a joint's centre of rotation to the line of action of the muscle, transforms linear muscle force into angular movement. Mathematically, a longer moment arm will enable greater joint torque production ($T = F \times MA$). However, when considering humans and animals, torque production is also affected by how fast the muscle is able to contract. The primary aim of this study is to examine the relationship between MA, muscle architecture and maximum torque production at high speed. The secondary aim is to see whether, as humans, our choice of sporting activity is related to our anatomical makeup. Thirty health men aged 20 – 40 yrs participated in this study (n = 7 endurance runners, n = 12 strength trained, and n = 11 untrained). Patella tendon MA was obtained using seven sagittal plane x-ray scans of the knee joint at approximately 60% maximal voluntary contraction; maximal concentric torque of knee extensors was obtained on the biodex at seven speeds between 30 and 300°/s; and fascicle length of vastus lateralis obtained using two-dimensional ultrasonography. Average patella tendon MA was 54.2 ± 5.1 mm and 50° flexion to 43.5 ± 5.0 mm to 90° flexion. Average concentric knee extensor torque was 264 ± 69 Nm at 30°/s, and 141 ± 38 Nm at 300°/s. As data analysis is still in progress, further analysis will assess relationship between these variables, including fascicle length, and across the different participant groups. Ideally, these results will be able to highlight the importance of considering joint structure along with muscle architecture when assessing force generation capabilities for high velocity movements.

What is the value in researching, writing and facilitating learning from localised organisational case studies in contemporary New Zealand business education?

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In a number of higher education academic disciplines and in the business field in particular, case studies have long been used and accepted as an effective teaching method by many. The acceptance of case study research and writing as an important contributor to the knowledge base of academic disciplines is less clear.

In the business context, while there have been many organisational case studies written, they often feature large trans-national corporations that can have little relevance to local conditions and the likely experiences of our students.

This research project originally began with the goal of creating two in-depth localized organizational case studies for use in teaching level 7 and 8 business papers and publication in an international textbook.

This project has now expanded to possibly include the use of action research, participant observation and student interviews, to identify: 1) any student learning advantages that accrue from the use of localized cases, 2) evaluation of the learning effectiveness when facilitating localized case discussions. It is also recognized that new unanticipated insights will emerge as this project progresses.

Key insights gained over the first six months of this project include:

- Some of the challenges from covert student use of AI in assessments can be better managed using original case material.
- There are many ways to use original case material in course teaching and assessment tasks.
- More relatable and relevant content for students.
- Difficulties gaining access to organizational information.
- There is a lot of benefit to be gained from the combined researching, writing and facilitating discussions of your own cases.
- The ability to up-date, change the topic focus and add material, to cases is invaluable.

It is noted that there are few academic articles which focus on evaluating the teaching and research effectiveness of the business case method. of the case method could open up opportunities for valuable collaboration in case development across tertiary education institutions and a greater recognition of the value that organisational case study research can bring in connecting our theorising to actual practice.

Micro-Plastics & Urban Waterways Invercargill

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Microplastics, plastic particles less than 5mm in size, have been at the forefront of environmental concern for the last ten years at least, as they remain pervasive environmental contaminants infiltrating aquatic ecosystems worldwide. The aim of our research was to compare microplastic presence in two inner-city waterways in Invercargill city: Otepuni Stream and the Waihopai River. Data was collected in early-winter 2024 and compared with data from 2019, under the same collection methods, time of year and sampling duration. Samples were collected using a plankton net placed in the upper-water column. These were then processed at the lab using an oxidation and density separation method and visually identified and catalogued in line with the previous methodology. In replicating this research, potential material provenance as well as size and shape of microplastics were not considered. The 2019 study suggested that microplastic concentrations in these waterways was driven from storm and wastewater drain inflows, where numbers of stormwater drains reflected the increased numbers of microplastics across the streams. Our results showed an alternate view, that while concentrations of microplastics increased across both sites, the Otepuni with two stormwater drains, had much higher concentrations than the Waihopai with six stormwater drains. This suggests that for Invercargill's urban waterways, the number of pollution point sources and microplastics concentrations are not directly related. This suggests further research variables should be considered to explain this. Transportation of this novel entity through freshwater is muddier than anticipated.

“You’re not competent if you’re Autistic”: Barriers and facilitators to identity development in teachers with disabilities in Early Childhood Education

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Research highlights the importance of teachers constructing a positive teacher identity for high-quality teaching. Teacher identity affects a teacher’s sense of purpose, resilience, efficacy, motivation, commitment, effectiveness and job satisfaction. Teacher identity formation starts from when student teachers enter ITE through to the end of their teaching careers. Teachers’ identities are socially constructed and therefore, lecturers, managers, other student teachers and teachers, tamariki, parents, whānau and learning and teaching contexts can all play a role in supporting or hindering a teacher’s sense of self.

A research project was conducted in 2023 which investigated the experiences of ECE student teachers and teachers with disabilities in Aotearoa New Zealand. The research project invited student teachers and teachers with disabilities enrolled in an ITE programme and/or working in ECE to complete an online survey. The survey was designed to capture their inclusion and exclusion experiences within these contexts. One of the aims of this research is to advance kōrero (conversation) on the barriers to and facilitators of equity and inclusion for student teachers and teachers with disabilities in their ITE programmes and ECE workplaces, respectively.

The results highlighted that being a disabled student teacher or teacher can involve struggles for inclusion, equity, choice and empowerment because of the social, cultural and physical barriers still prevalent in society that limit their acceptance and inclusion. These barriers tend to put disabled teachers in positions of powerlessness and to silence them, profoundly undermining their sense of self-worth and identity.

In this presentation, insights into, and understandings of, the barriers and facilitators to positive identity development in teachers with disabilities will be discussed. It will highlight the importance of how ITE and ECE workplaces can challenge barriers and support the construction of positive teacher identity for disabled teachers and offers recommendations for future policy and practice.

Ko wai au? Identifying barriers for tauwi (non-Māori) practitioners developing cultural safety: initial stage

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This study aims to explore the barriers tauwi (non-Māori) practitioners in the health and social sectors experience, when developing culturally safe practice and create a model which addresses these. Firstly, cultural safety will be explored as a concept along with identifying known barriers to developing this. This will then be explored with participants, to better understand individual, collective and systemic challenges. Lastly, a model will be proposed to support cultural safety development for tauwi practitioners, addressing barriers from the individual to the systemic levels of practice. This study is in its initial stages, exploring literature.

Aotearoa New Zealand as a bicultural nation by foundation, continues to grapple with the practicalities of embodying biculturalism in a colonised nation. Te Tiriti o Waitangi advises the protection of Māori ways of being and thinking, which has a direct influence on service users of social and healthcare. Cultural safety is a means to honour Te Tiriti o Waitangi, directing practitioners to be self aware within their practice and ensure their professional behaviour facilitates Māori ways of being, preventing further discrimination and harm to Māori within our services and wider, within our communities. However, statistics continue to highlight difficulties implementing culturally safe services and practice. Social and health outcomes continue to demonstrate service design and delivery contributing to negative impacts in social and healthcare for Māori.

This research takes a mixed method approach, utilising an explanatory sequential design to survey participants regarding their knowledge and skill development in cultural safety and barriers to developing these. This will be followed by semi structured interviews to further explore themes that emerge. The implications of this research include supporting individual practitioners and organisations to better understand and plan for cultural safety development and service provision, through a model which addresses the barriers identified through this study.

Perceptions of Southland Organisations: Required Skills of Accounting Graduates and Accounting Project Needs

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Phase one of this research distributed a questionnaire to managers of Southland accountancy firms and organisations with their own finance departments. The questionnaire focused on accounting practices, unmet needs, and the potential value that a student accounting project could deliver to organisations. The results of this research indicated that a range of soft skills were important, and some were lacking in accounting graduates. Concerns regarding confidentiality, suitable projects, and training time were raised regarding student accounting projects. Phase two of this research deepened our understanding of the skills needed by accounting graduates when we interviewed managers from the same population. We uncovered valuable insights, which will be used to develop and deliver the ACCY7104 Professional Accounting Project paper. The data collection method was semi-structured interviews of 6 to 8 chartered accountants.

Findings will inform the way the accounting project is offered which is expected to improve the connections between ākonga and the organisations resulting in positive outcomes for both parties. We believe that the only way to meet the needs of local organisations is by finding out directly from them what skills are important for future accountants, and how accounting projects can assist with developing these skills.

Participating organisations rely on tertiary providers to fill their vacancies with trainees and graduates. The findings of the research will be used to strengthen the relationship between tertiary providers and organisations. It is also expected to improve ākonga outcomes by connecting learners directly with organisations, and ensuring tertiary providers are developing the required skills.

Determining New Zealand homeowners' understanding of capital gains tax

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New Zealand is unusual among OECD countries for its lack of a capital gains tax (CGT) on investments, including property. A CGT has been proposed multiple times over the last 40 years but has been deemed politically unfeasible due to widespread opposition from property owners, both investors and homeowners. This is despite the fact most international CGT regimes have an exemption for primary residences, implicitly recognising the common distinction between items of a personal nature and items for business or investment purposes with regard to taxation. This research study investigates the level of awareness among New Zealand homeowners regarding the likely implications of implementing a CGT. The study employs a mixed-methods approach, combining quantitative surveys with qualitative interviews to assess both general awareness and specific knowledge about CGT. A representative sample of 100 homeowners across various demographics will be surveyed to gauge their understanding of how CGT could impact their own tax obligations, property values, and investment decisions. Additionally, in-depth interviews with 10 participants will be conducted to provide deeper insights into their awareness levels, concerns, and sources of information. The study aims to determine the need for targeted educational initiatives to address gaps in understanding and provide homeowners with accurate, comprehensive information about the potential introduction of a CGT. By determining the current state of homeowner awareness, this research aims to inform policymakers and stakeholders, ensuring that future discussions and decisions regarding CGT are grounded in a clear understanding of its potential impact on New Zealand homeowners.

Appropriation of Engineering Discourse through the Technological Design Process

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One of the goals of Science, Technology, Engineering, and Mathematics (STEM) education is to cultivate critical thinking skills through engaging in interdisciplinary STEM discourse. This study, underpinned by an interpretivist philosophy, explores how students naturally blend science, mathematics, and technology within a Year 11 (age 15-16) technology classroom during a large design project. A qualitative case study approach was adopted, using thematic analysis to examine data collected from classroom observations, audio recordings, interviews, photographs, and student portfolios.

The research focuses on how students engaged in the engineering design process and applied scientific and mathematical concepts while designing individual luges. The findings indicate that classroom discussions frequently sparked interdisciplinary discourse, with students using science and mathematics to interpret their observations and improve their designs. The teacher's facilitation of these discussions further supported this integration. Students' written conclusions in their portfolios often echoed these classroom conversations, highlighting their ability to apply theoretical knowledge to practical engineering problems.

The study reveals that technology education provides an ideal platform for fostering STEM literacy by promoting authentic, hands-on projects. By working on real-world problems, students were able to integrate knowledge from multiple STEM disciplines, resulting in meaningful engagement with both the design process and the development of discipline-specific discourse.

This research contributes to the understanding of how technology education can facilitate STEM literacy through the design process, highlighting the importance of classroom dialogue and hands-on experimentation in helping students develop a deeper understanding of STEM concepts

Classifying Online-Only Research Methods: Assessing the potential of Netnography, Social Media Analysis, and Emerging Digital Techniques for use in post-graduate research

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The aim of the study is to develop an emerging typology of research methods that utilize existing online data as primary sources, without requiring traditional data collection methods. The genesis of this research is to investigate the potential for these novel online data collection techniques as an alternative to traditional data in post-graduate research.

The rapid expansion of digital data sources has transformed research landscapes across various disciplines. Research is becoming much more focused on transforming existing data, in preference to traditional research methods which often require participant involvement, which can be time-consuming, costly, and fraught with ethical complexities. Research students often struggle to obtain research settings, participants and funding for their research.

This research seeks to identify and classify these emerging digital techniques to establish their legitimacy as a means of primary research. We will seek to analyse the strengths, limitations, and ethical considerations of each method within the context of post-graduate research projects.

A systematic literature review provides the identification of existing research methods that use online data without the need for participant involvement. This is followed by semi-structured interviews with research supervisors to identify and categorise suitability of these methods for post-graduate research degrees.

This research fills a critical gap by offering a structured overview of online-only research methods, contributing to the body of knowledge on digital research methodologies. This overview is expanded into a framework that will equip students and research supervisors to consider the appropriateness of digital and online-only options for research degrees.

Do Nursing Students Find Learning Contracts Improve Clinical Skills During Clinical Placement?

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Learning Contracts are instigated for students who after a formative assessment, have identified learning needs. This is done in collaboration with the student and nurse educator. Thus, giving students, a voice and responsibility for their learning. The individualised learning contract outlines what skills require enhancement, strategies for development, and evidence of the progression of skills.

Southern Institute of Technology (SIT) requires nursing students to pass a practical summative assessment before proceeding to clinical placement. Students either receive an Achieve or Non-Achieve outcome. Students who receive a Non-Achieve are unable to proceed to clinical placement. An Achieve grade allows students to proceed to clinical placements. Students who have identified learning needs are placed on a Learning Contract. A Learning Contract aims to provide additional support to students on clinical placement to improve their clinical skills.

This research will explore the perspective of nursing students placed on a Learning Contract. Do these students feel the Learning Contract was useful in supporting the development of their nursing skills? If Learning Contracts are not useful, what other support can be provided to develop their clinical skills?

Students placed on a Learning Contract were invited to participate in an individual semi-structured interview to gain their perceptions of the usefulness of the learning contract. This is a qualitative research project. Interview transcriptions will be thematically analysed to identify recurrent themes and patterns.

Learning Contracts have been used for several years at the SIT and no research has been conducted to establish the student's view if they find them effective. Findings from the research will be reported to the SIT School of Nursing. This will allow for changes in how students are supported on clinical placement to ensure the development of clinical skills and knowledge.

Work-Life Balance and Nurse(s): A Review of Literature

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Background: The nursing profession is currently experiencing a shortage within the workforce. Global nursing workforce shortages, including in New Zealand, have increased nurse workforce mobility. As a result, overseas-trained nurses have sought better living and working conditions for themselves and their families. The workforce shortage of nurses poses an issue in the current and foreseeable future for governments and employers, challenging the maintenance of the nursing workforce and impacting the ability to deliver health services.

Aim: To analyse and synthesise knowledge on Nursing Work-Life Balance, identifying gaps in current knowledge and avenues for future research, specifically focusing on New Zealand.

Methodology: A narrative review was undertaken by searching the following databases: CINAHL Ultimate, Business Source complete, E-Journals, Health Business Elite, Health source: Nursing/Academic Edition, MEDLINE Complete, Psychology and Behavioural Sciences Collection, Sociology Source Ultimate. The search was facilitated using the following search terms and Boolean operators: Work-Life Balance, WLB, Work-Life Balance and Nurs(*).

Findings: The search resulted in 368 articles. Following the abstract review and application of the inclusion and exclusion criteria, a total of 128 articles were included in the review. The themes revealed that nurses' experience of Work-Life Balance was correlated to age (generational group), gender, and relationship status (married/defacto vs single).

Discussion: Limited qualitative or quantitative research has been conducted with nurses in management roles in New Zealand and globally. Furthermore, there remains a lack of clarity on what is work-life balance in the nursing profession. This provides an opportunity to explore what nurses in New Zealand perceive as Work-Life Balance, with the potential to develop a definition, inform strategy, improve retention and foster employee health and wellbeing.

Non-Renewable Energy Use in Solar-Powered Streetlight Operations: Case Study for Invercargill, New Zealand

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This research addresses the growing interest in adopting renewable energy solutions for municipal services, driven by increased climate change awareness. It specifically focuses on the challenges of implementing solar-powered street lighting systems on highways. A major issue identified is the frequent need to clean solar panels, as even small amounts of dust or bird droppings can significantly reduce their efficiency. Cleaning requires regular patrols, often using diesel-powered cranes, which introduces a non-renewable energy component to the system. To assess this impact, a model was developed considering factors such as highway length, pole spacing, bulb types, solar panel ratings, and available solar radiation. Simulated for a hypothetical 10 km highway in Invercargill, New Zealand, the model found that for every 107 kWh of solar energy produced, 1 kWh of non-renewable fuel is required, equivalent to 8,342 liters of diesel over 20 years. While this fraction is relatively small, it's important to note that the study assumed weekly cleaning. In regions with frequent dust storms or high air pollution, more frequent cleaning would be necessary, increasing both operational costs and the non-renewable energy component. The research advocates for incorporating this hidden energy cost into renewable energy studies to provide decision-makers with a comprehensive matrix for green project planning.

Rhetoric vs Reality - Repositioning the Key Competencies in Curriculum Design

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Introducing the Key Competencies to our curriculum was pivotal to altering our perception of education, to reconsider the role of education and question key assumptions regarding the process and purpose of education, an example, that all students must learn the same thing at the same time. A tension arises when we talk about the changes needed but still make the same assumptions about how students learn, and engage in the same pedagogical practices. This study aims to identify how paying more attention to the competencies in planning our teaching and learning programmes will prepare our ākonga with life-long skills to successfully navigate by themselves through unfamiliar contexts, skills they will use throughout their lives (OECD, 2019).

The Tertiary Education Commission, identified skills and qualities employers want, which include Analytical and Critical thinking, Problem-solving, Interpersonal Skills, and Self-management Initiative. Sitting these skills alongside our existing learning focuses at school, it is difficult to see strong links between the two. Unless school curriculum design places emphasis on the meaningful and intentional use of the competencies, pedagogy will remain the same, and the gap between what schools deliver and what employers require, also remains.

Through an auto-ethnographic lens, I will engage with a case study approach involving schools within a *Kāhui Ako, to realise in depth the understanding and interpretation of the key competencies by several groups of people within these schools. Qualitative research, collecting data through interviews, questionnaires, observation and narrative surveys, will be premised on developing an understanding of the comparisons and patterns in how competencies have been embedded in local curriculum design in the multiple school realities, to generate a rich narrative to understand best practice.

A shift from the more instructional approach to a relational pedagogy, will afford all students opportunities to succeed, which will address the gaps employers notice. The intended research will provide a platform to revisit curriculum design to encourage practice that is conducive to the competencies doing the work they were designed to do. I am keen for researchers in education to offer feedback on my intended research.

Integrating BIM Frameworks for NZ Construction Digitalization

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This study reviews the frameworks developed for Building Information Modelling (BIM) education, research, and adoption.

Digitalization in construction has proven the improvement in practices with high quality, low cost, and shorter delivery times of construction projects. Despite advancements in other OECD countries, New Zealand lags behind in BIM adoption. Several BIM frameworks have been developed in the last two decades, but no study has found integration of these frameworks. Developing integration within this framework establishes the strategic collective initiative towards construction digitalization.

All BIM frameworks were retrieved from Google Scholar published in the last two decades, covering education, research, technology, application, and adoption aspects. Content analysis was performed to determine the overlapping elements and outliers.

This research is currently in progress. The coverage of BIM frameworks (including roadmaps) is education (3), research (2), technology (2), application (10) and adoption (5). Further, there are common elements in most of the frameworks but also several outliers. Integration modes were identified among the frameworks.

This study is a pioneering effort to qualitatively review the BIM frameworks published in New Zealand and identify the potential opportunities to establish the collective effort for construction digitalization. The review identified the common elements within frameworks and their relations. This study holistically covered all aspects of BIM technology, processes, and people. This study potentially helps AEC, education, and the client sector to realise the need for combined efforts towards the digitalization of the New Zealand construction industry.

LEED rating analysis of Student hostel building

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Appropriate student hostel building is essential to address the basic needs. However, the sustainability of these buildings has been given less attention. This study reports the LEED rating analysis of student hostel buildings.

Climate change is compelling to introduce sustainable construction materials and methods. However, construction is still in transition from conventional to sustainable approaches. Building evaluation systems (BES) are used to determine to what extent the buildings are energy efficient and cause low carbon emissions. Leadership in Energy and Environmental Design (LEED) is among the leading BES covering factors such as energy efficiency, water conservation, materials used, environmental quality, and the building. The lack of real-life case studies is the key barrier to translating and implementing the New Zealand climate resilience policy.

In this study, student hostel building has been considered to apply the LEED protocols. The data was retrieved through the Facilities department, including drawings, specifications and bill of quantities. The LEED protocol v4.1 Residential: Multifamily was used for the evaluation covering location and transportation; sustainable sites; material and resources and indoor environmental quality; innovation; and regional priority.

The student hostel building received 60 points and was categorised under the Gold category. There are several aspects for which there is access to information, such as electric vehicle charging infrastructure, light pollution reduction, water metering systems, enhanced commission testing, management of refrigerants, and air and thermal comfort strategies.

This study is a preliminary study to understand the sustainability requirements and propose measures to improve. The findings are consistent for similar construction within the country context. The findings are useful to be incorporated for the new construction of student hostel buildings. Life cycle analysis using building information modelling potentially enhances the sustainability evaluation.

Enhancing Indigenous enrolment in Construction qualifications

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This study identifies the potential strategies to increase student enrolment in construction diploma and bachelor's qualifications.

Research shows the performance of indigenous construction companies is not at par in comparison to companies having less than 50% share. Further, it has been found that Indigenous representation in higher managerial positions is very limited. The right career pathway sets the foundation for a successful profession. Prospective students, after high school, opt trade certifications, even having the potential to complete a diploma or bachelor's qualification. Currently, the representation of Maori/Pasifika students is less than 5% in construction diploma/bachelors. There is an information gap that should be filled to make the prospective young fellows pursue construction qualifications.

In this study, a systematic literature review was conducted to identify the potential strategies to improve student enrolment. Google Scholar was used to finalise the key studies to develop the eleven strategies the polytechnic sector should adopt. These strategies were then evaluated for Otago Polytechnic to benchmark and plan for the future.

These are In-depth market and need analysis; curriculum and program enhancement; strategic industry partnership; targeted recruitment and outreach; scholarships and financial incentives; enhanced student support services; alumni engagement and success stories; flexible learning options; innovative teaching methods and technologies; branding and institutional visibility; feedback and continuous improvement. It was found Otago Polytechnic is lacking in strategic industry partnerships; target recruitment and outreach; alumni engagement and success stories; feedback and continuous improvement. However, there is a need to develop an actionable plan to execute these strategies.

This study helps to understand the potential strategies to increase student enrolment in construction qualifications. These strategies apply to any educational institute located in countries where there are indigenous students. The government should support, administratively and financially, the polytechnic sector to take these initiatives.

Donation motivations and behaviour in Aotearoa New Zealand during financially challenging times

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While current economic conditions have put pressure on consumer spending, the impact on people's willingness to help those less fortunate was unknown. The purpose of this research was to discover more about donation motivations and behaviour of adults within Aotearoa New Zealand, and to find out the role that marketing activities play in donating behaviour. A sequential mixed method research design was adopted, with data being collected from an online questionnaire, followed by semi-structured interviews. Ethical approval for this research was granted by the Southern Institute of Technology Human Research Ethics Committee.

Initial findings suggest that people are more likely to donate to help others rather than to make themselves feel good or look good, and some kind of personal connection is preferred. Some people are still sceptical about how effectively their money is being used, and the majority of people do not need to be reminded in order to regularly donate. The type of charity was perceived as more important than the location, and influenced the level of support. There were mixed feelings about donations having to be used within the region, but it was expected that charities will provide information about how donations will be spent at the time of donating.

The practice of donating within Aotearoa New Zealand remains important, however, there are growing concerns regarding the heavy reliance on individuals to support charitable practices, and also the increasing number of charities. People are becoming more discerning about which charities they donate to, and are less inclined to donate on the spur-of the moment. It is important that charities understand individual donation behaviour so that they can better direct their efforts and maximise revenue streams

Value Engineering Processes adopted in the Construction Industry – A literature synthesis

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The Value Engineering (VE) process focuses on identifying and implementing cost-effective alternatives in a building or its elements, while maintaining both primary and secondary functions. Additionally, it involves eliminating unnecessary costs that do not contribute to or exceed the required functions. Even though VE is of prime importance to the construction industry for securing the effectiveness of their projects, the current level of applicability of VE is not satisfactory due to its inherent weaknesses in tools and techniques used. Through a comprehensive literature review, this study assesses current value engineering practices adopted in the industry. The study focus on a broad overview of all professionals and or contractors in New Zealand. It also identifies any barriers to applying value engineering to commercial buildings in New Zealand. More than 30 references from recent journals were reviewed for this study.

The literature synthesis outlined the current processes, tools and techniques used at each stage, as well as alternative techniques introduced by various researchers. Initially, an overview of the VE concept and its importance to construction projects was established. Next, the VE process was examined in detail along with the tools and techniques used in each phase. The benefits and drawbacks of alternative techniques and standard methodology introduced by various researchers were also examined. Since previous literature suggested that VE applications were comparatively low, possible causes were also investigated. A major problem was the lack of a robust procedure and the subjectivity of some techniques used. Overall, synthesizing the literature knowledge established a research gap that needs to be addressed to provide an objective VE methodology that can be applied in today's volatile commercial construction market. Therefore, this confirms the need for further research to identify reasons for poor performance of commercial buildings together with developing a standardised approach to VE in commercial construction.

Re-Evaluating Employment Policies for Public-Facing Roles: Expanding Legal Obligations and Implications for Industry Engagement and Student Project Management—Lessons from the Dr Siouxsie Wiles Case

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Employment law has long recognized risks to the employee to include their wider circumstances. However this width can be seen as delineated by direct employee well-being driven by factors such as work-life balance, mental health, and family needs. The hazards arise from an existing event or circumstance where the harm is contingent on a hazard which is identifiable and the employer can manage proactively.

Wiles expands employer duties to external factors beyond the traditional workplace to include public-facing roles requiring a wider view of risk in unpredictable environments where it can be argued that the harm may reveal the hazard, leading to an arguable evolution of what constitutes a workplace and a workplace risk. Interestingly Wiles herself may have redefined the workplace by engaging publicly in a role beyond the university's defined scope. This evolution is not consistent with current NZ Health and Safety law creating a dangerous fluidity of risk and harm.

This Health and Safety at Work Act 2015 (HSWA) and Employment Relations Act 2000 (ERA 2000) are synergistic. Wiles' public-facing role extended her workplace to social media where the harm occurred. This HSWA then applied to that role and imports ERA's good faith obligations to address the harm.

These synergies of role, scope and fluidity create a problematic dynamic for employers to know the boundary of their duties and to manage them. Workplace including an employee's public profile and reputation adds significant risk, especially when the employer cannot effectively control the risk environment.

We consider the potential risks posed to polytechnics arising from harm and the risk to education of risk averse policy limiting engagement in industry collaborations and student projects and ask where the balance of legal obligations and quantifiable risk management lies, offering insights on risk management, crisis communication, and training for policy development.

The time of our lives: how the oldest old are enriching our understanding of successful ageing

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The aim of this research is to further add to the literature findings by obtaining information on the experience of ageing from three nonagenarians from the Southland community. The project aims to gain further insights into factors which give rise to successful ageing. Context: This research project is very relevant because the global population of the oldest old people, over 85 years is expected to triple between 2015 and 2050. Educating the community about factors that encourage successful ageing in the oldest-old, may assist in reducing the burden of dependency and allow people to live more active and productive lives, for longer. Methodology: Semi structured interviews were conducted with three nonagenarians by face or email. All face interviews recorded to ensure accuracy of data. The data obtained from the interviews has then been integrated into the literature review findings. This exploratory design uses a mixed method approach with qualitative (semi structured interviews) and quantitative (some of the literature findings) combined to broaden exploration of the topic. Results: Results indicate that pursuing successful ageing strategies, for example, exercise and social connectedness, enhances the health and wellbeing of nonagenarians. Significance and implications: Reducing the burden of dependency in the oldest old and allowing nonagenarians to live more productive lives has far reaching economic and social benefits for our community. In addition, the lived experience of nonagenarians captured in this research provides important contemporary teaching and learning opportunities within nursing and health education.

Discovering the predictive power of statistical and machine learning techniques on the New Zealand stock market indices

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Purpose: This study explores the predictive power of Autoregressive Integrated Moving Average (ARIMA) and Long Short-Term Memory (LSTM) models in forecasting stock indices, NZX10 and NZX50, on the New Zealand Stock Exchange.

Background: Accurate index forecasting is crucial for investors, financial analysts, and policymakers to make informed decisions. Our study examines the efficacy of ARIMA, which stands out at acquiring linear patterns, and compares it with LSTM, a deep learning model good at handling complex, non-linear patterns.

Research Question: This study investigates “how the predictive precisions of ARIMA and LSTM models differ when redevised models are applied to forecast the time series of the NZX10 and NZX50 indices on the New Zealand stock exchange (NZX)?”

Methodology: This study employs a quantitative approach, utilising ten years of daily historical data from the NZX10 and NZX50 indices, with predictive precision evaluated using Root Mean Square Error (RMSE) and Mean Absolute Error (MAE).

Results: This analysis finds that while ARIMA models perform well, LSTM models achieved more significant predictive superiority by effectively capturing the non-linear dynamics on the indices, revealing that LSTM holds considerable promise for enhancing predictive performance in financial forecasting.

Conclusions: Our study finds that the LSTM is a superior forecasting model that captures linear and non-linear dynamics in stock market indices.

Exploring NZX 10 stock movements: tapping into the predictive power of statistical and machine learning models

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Stock market prediction plays a vital role in the financial markets and is always challenging due to its volatility. The development of artificial intelligence and stock market predictions has gained serious attention from researchers worldwide who have applied various models to analyse financial time series and to develop accurate stock-predicting models. Thus, machine learning models witnessed super performance compared to all other methods.

The significant fluctuations, such as pandemic-induced volatility and global macroeconomic changes, impacted the New Zealand stock exchange during 2015-2023, which affected both domestic and international investors and investees. However, there is a notable lack of research focusing on the context of New Zealand. No studies have explored stock price predictions for NZX 10 companies using ARIMA, LSTM, and CNN models. This research addresses this gap by developing an effective stock prediction model tailored to individual stocks.

The research question of this study is “How efficient are the chosen time series predicting models in forecasting the share prices of the NZX10 companies listed on the New Zealand Stock Exchange during 2015-2023?”

Historical data related to NZX10 companies are extracted from the NZX database. Reformulated ARIMA, LSTM, and CNN algorithms were applied to the daily historical stock prices of NZX 10 companies, with prediction accuracy assessed via MAE, MAPE, and RMSE metrics. Experimental results showed that LSTM proved to be the more robust methodology for most companies.

Research and AI: When your friend is your foe

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"It is the obvious which is so difficult to see most of the time. People say, 'It's as plain as the nose on your face.' But how much of the nose on your face can you see, unless someone holds a mirror up to you?"

- Isaac Asimov, I, Robot

In this interactive discussion on Research and AI we will start with looking at how AI introduces itself as a friend, an aide, to research. We will look at some interesting AI tools out there and some ways prompts can be used to get the researcher thinking in yourself as well as aid in the research process. AI can take simple repetitive tasks from us with ease, giving us time to do the complex. And, if it is too hard, such as having to manually work out a chi square, AI can guide and teach us through the complex. But just as AI is a friend to a researcher it also poses darker ethical risks around data, whose data, what data, and what happens to our own interactions with AI. This is an opportunity to talk deeply about AI and Research.

December 5-6



He piko he taniwha, he taniwha rau / On every bend a chief. Growing researcher practice and praxis

Moana Waitoki

What does it mean to conduct research that critically engages with the lived realities of communities? How can researchers ensure their work meaningfully contributes to societal transformation? Mātauranga Māori, as a dynamic system of Indigenous knowledge, challenges Eurocentric paradigms by offering relational and intergenerational approaches to addressing complex issues. Critical Indigenous research methodologies emphasise relationality, reciprocity, cultural integrity, and the co-creation of solutions rooted in community values. This presentation positions mātauranga Māori as central to developing sustainable, life-affirming responses to systemic challenges. It critically examines how entrenched colonial structures perpetuate inequities highlighting the potentiality of Indigenous knowledge within research paradigms. Through examples of Māori resistance and regeneration, it illustrates the transformative potential of Indigenous knowledge systems in advancing enduring and equitable societal change. I offer examples of research that has pivoted from what was intended to show the importance of reflecting the needs of the community.

Dr Waikaremoana Waitoki (Ngāti Hako, Ngāti Mahanga) is an Associate Professor in Te Pua Wānanga ki te Ao Faculty of Māori and Indigenous Studies at the University of Waikato - with interests in mātauranga Māori, health/hauora and Māori wellbeing and the social determinants of health. She is a past president of the New Zealand Psychological Society and Co-Convenor of He Paiaka Totara, the Māori Psychologists Network. Moana is a founding member of the Asia Pacific Psychology Alliance. She is the co-editor of the first Māori psychology textbook *Te Manu Kai i te Mātauranga*, Indigenous Psychology in Aotearoa. She is a recipient of the Royal Society, New Zealand, Apārangi Te Puāwaitanga Research Excellence Award for her distinctive contribution to psychology.

Empowering Through Education: Meaningful Refugee Participation in New Zealand Society

Mazharuddin Syed Ahmed

This keynote explores the critical dimensions of meaningful refugee participation in New Zealand society, examining four key pillars: education, economy, health, and self-independence. Drawing from real-world experiences and research, the session delves into how these interconnected elements contribute to successful refugee integration and empowerment. The presentation addresses fundamental questions about the nature and significance of meaningful participation, particularly focusing on refugees' experiences within Aotearoa. Through examining both barriers and enablers to participation, the discussion will highlight practical strategies for enhancing refugee engagement in various aspects of society. Key focus areas include:

- Understanding diverse perspectives on meaningful participation
- Identifying systemic barriers and practical challenges
- Exploring successful enablers and support mechanisms
- Developing strategies for enhanced integration

The session aims to stimulate thoughtful discussion about how organizations and communities can better support refugee participation across multiple domains of life, leading to more effective and inclusive integration practices.

Dr Mazharuddin Syed Ahmed is an experienced and passionate academician and technology evangelist with a demonstrated history of teaching Building Information Modelling (BIM), Circular Economy and Carbon Footprint Assessment. He is a Building Performance Data Scientist, Architectural Engineering Program Development and e-Learning Content Design Consultant. He is also an active member of the Christchurch Call (to eliminate terrorist and violent extremist content online) and a board member of the Christchurch March 15 Terrorist Attack Collective Impact Board New Zealand. A passionate public speaker on spreading the awareness of the dangers of hate, prejudice, and propaganda-driven fake news, Mazharuddin has developed a Level 5 course that deals with countering hate speech based on human rights education and narratives.

Business Students' Perception of Reflective Practice

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In business, reflective practice supports professionals to enhance their problem-solving skills, identify areas for improvement, and promote areas of growth. If used effectively and purposefully, reflection facilitates ongoing personal and professional learning. Therefore, reflective practice is pivotal in developing undergraduate business learners and facilitating their growth throughout their academic journey. As learners progress from their first year to their final year of study, the utilisation of reflective practice and writing becomes increasingly pronounced, shaping their ability to critically analyse their experiences, enhance their learning, and inform future decision-making. This study aimed to delve into the development and experiences of undergraduate business learners undertaking reflection as part of their studies within the Bachelor of Applied Management programme in the School of Business. The research examined how learners can engage with reflective writing and how this process evolves and deepens from the foundational stages in year one to more sophisticated applications in year three and in the workplace. The research study adopted a mixed-methods approach to capture the views of School of Business graduates, of current learners and those from the previous five years. Through an online questionnaire and semi-structured interviews, data was collected gaining insights into reflective practice. By exploring the progression of reflective practice from the perspective of business students the findings have provided valuable insights and understanding of reflection in an educational and professional context and where changes can be made to the curriculum. This has practical implications where the transfer of academic knowledge and experiential learning helps shape understanding as a core capability within the programme and graduate profile of the qualification. Reflective observation is an important part of experiential learning that allows learners to draw meaning from their experiences and incorporate new meaning into their learning.

Crafting Memorable Journeys: The Role of Storytelling in Cultivating Soft Skills Competence within Tourism

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This paper presents findings from research highlighting communication as the foremost priority in tourism contexts. It highlights the potential of embedding storytelling opportunities within tourism programmes to foster essential soft skills. Storytelling, intertwined with effective communication, emerges as essential for engaging tourists and fostering connections. In addition to the storytelling focus, the research draws on case study methodology, including interviews with industry representatives, a focus group with local tour operators and group interviews with tertiary tourism graduates. These qualitative methods provided valuable insights into the industry's needs and the competencies required from graduates, directly informing tourism educators and the industry. Additionally, the research advocates for a focus on storytellers and their interpersonal abilities, emphasising problem-solving and resilience in navigating diverse tourism scenarios. Drawing from experiential learning models, recommendations include integrating storytelling into tour guiding in the natural and built environments and promoting evidence collection in workplace settings. Additionally, the abstract proposes initiatives such as "giving back" volunteering and community-centred approaches, alongside a call for regenerative design practices in tourism education development. By incorporating these recommendations, tourism programmes can nurture effective communicators, instil a sense of community responsibility, and contribute to sustainable tourism practices.

Sustainable Water Management Using Crushed Glass and Mussel Shell Mixtures for Urban and Rural Applications

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In New Zealand, the challenge of poor maintenance of septic tanks has resulted in significant environmental impacts, where untreated effluent contributes to water pollution. Contaminants from impermeable surfaces such as roadways and rooftops, further degrade water quality in urban areas. This study aims to address these challenges, investigating sustainable solutions for septic tank effluent treatment and heavy metal removal using innovative treatment media. This research evaluated the mixture of crushed mussel shells with crushed glass for treating septic tank effluent and roof runoff. Seventeen filter media setups were established using different layer configurations and mussel shells-crushed glass mixture ratios. Planter box raingarden modules, constructed using ART3 media combined with crushed mussel shells, crushed glass, and lime chips, were tested across three stormwater sources. A test rig was constructed simulating real environmental conditions in a discharge control trench, where treatment efficiency was recorded and compared between 2A sand and the mussel shells-crushed glass media. Water quality tests demonstrated significant removal rates of both total and dissolved zinc from stormwater roof runoff. Lifecycle cost analyses revealed crushed glass' economic advantage, half the cost of 2A sand annually per household while emitting significantly less CO₂. This research contributes to sustainable water management practices, validating crushed glass and mussel shell mixtures as effective alternatives in both urban and rural settings, and underscoring their potential to enhance water quality, reduce environmental impact, and offer cost-effective solutions for communities facing wastewater and stormwater management challenges.

Advancing Pedagogical Strategies in Chinese Transnational Education: Lessons for Te Waipounamu

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This research project, ongoing since 2019, explores changing practices and pedagogical strategies within Chinese Transnational Education (TNE) programmes, focusing on partnerships between New Zealand, the UK, and two joint education programmes in China. Chengdu and Dalian, key cities with growing global influence, serve as the settings for this study. The main aim of the study has been to identify the most effective teaching methods in Chinese TNE contexts. The researcher employed a qualitative descriptive methodology, centred on human experiences to develop insights. Data collection involved 16 semi-structured interviews and observations of 16 teaching sessions across two subject areas: business management in Chengdu and mechanical engineering in Dalian. Both programmes are delivered using English as the medium of instruction. Observations were documented in situ, though no recordings were taken. The COVID-19 pandemic impacted both programmes, creating a need for building greater resilience and adaptation. This research addresses the demand for cross-cultural approaches that can bridge divides between contrasting educational paradigms. Early findings suggest that learners will receive an improved experience through the integration of digital tools and more culturally responsive teaching methods. One of the more unexpected findings to emerge relates to well-being and mental health concerns. An implication of this research is the opportunity for more informed insights. In this case, Ara and Otago Polytechnic could potentially utilise such insights in support of their plans for more responsive, inclusive, and sustainable TNE programmes.

Teachers Plant Seeds That Grow Forever

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This presentation will describe a research project that aimed to close the discrepancy between the actual level of English and the level needed to achieve in English as an Additional Language (EAL) learners' regular programmes at higher educational institutions (HEI). The overarching question was if application of a course approach, similar to one offered at University of New South Wales (UNSW), is effective in improving English language skills in a New Zealand cohort of EAL learners. The Ara Personalised Language Upskilling and Self-development (Ara PLUS) course was designed and trialled at Ara Institute of Canterbury as part of an ethnographic research project, which included observation of the Personalised English Language Enhancement (PELE) course at UNSW. With the guidance of the teacher, students on these courses design their own English enhancement project, after identifying their language shortcomings and choosing the area of English they most need to improve. The course supports students in setting measurable goals, identifying strategies, deciding on resources, and allocating time for their study. Students' own measurable data shows that participation in the Ara PLUS course enhanced their English language proficiency. Other findings were that the course helped develop their cultural understanding, self-confidence, efficacy, and communication skills. This presentation will describe the research project, and touch on the challenges, achievements, and outcomes of the Ara PLUS course. Reflections and advice shared in the presentation will be valuable to others interested in offering similar courses at their institutions.

Exploring Vocational Education and Training's Role in Just Transitions: A Practice-Based Approach to Researching VET Through a Case Study of Apiculture Education and Training in Aotearoa New Zealand

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Backgrounded by the policy context for transforming Vocational Education and Training (VET) to support social and economic transitions to a low-carbon future, this presentation reports on a recently completed doctorate that used practice-theory to explore vocational practices as the sites where transformations and transitions are expected to occur. In that study, a year-long ethnographic case study of the practices of beekeeping was synthesised against a review of the current suite of apiculture qualifications and programmes. The findings showed the approach contributed to an improved understanding of the conditions of possibility of how vocational practices change or remain the same and VET's role in this change. Through the synthesis, it was then possible to propose more meaningful engagements with apiculture education and training that could also address some of the long-standing challenges, as well as innovative opportunities, for the VET sector in Aotearoa, New Zealand, going forward. The presentation briefly examines the usefulness of this theoretical approach and proposed entry points into research design for VET researchers as well as some theoretical, strategic and practical considerations for further research. It is hoped the approach illuminates why and how this type of research can be valuable to VET practitioners and policy makers while offering some pointers into future collaborations and research projects for the Aotearoa New Zealand VET sector and beyond.

Impact of Sustainable Business Practices in the Tourism Industry: A Study of Hotel Sector

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This study examines sustainable business practices in the tourism industry with a focus on the hotel sector. The main areas investigated in this research were expected sustainability practices, their impacts on the industry, and implementation challenges. The study adopted a quantitative approach; survey questionnaires were used to collect data information from participants. Questionnaires were distributed to employees and managers of some five-star hotels in Auckland. Usable data for analysis came from more than 100 participants. Descriptive analysis was used to analyse the data collected. This research was able to use numbers to describe the qualities of its data set and condense data sets to sample and compact forms. Data collected were analysed as follows: expected sustainability practices of hotel employees had an average mean of 4.151 (SD = 0.760). Findings indicated that a substantial number of participants strongly agreed that hotel employees are expected to engage in the following sustainability practices, among others: energy saving, water saving, recycling, and purchasing local products. Analysing data collected on the expected business practices for the hotel sector growth had an average mean of 3.95 (SD = 0.817). This shows many participants strongly agreed that for the hotel sector to attain sustainable economic growth, it must implement sustainability practices of corporate social responsibility and incorporate good environmental policies in its organisational strategy. The average mean on the data collected and analysed shows the challenges of implementing sustainable business practices in the hotel sector is 3.55 (SD = 0.91). The result indicated that implementing expected sustainable business practices is costly, requires time and manpower, support information is needed, and processing is complex and difficult to translate to practical strategies. Additionally, findings indicated that if the hotel sector engages in good sustainable business practices it will realise a reduction in costs and good public relations.

Novel Implementation of LULU Filter: Project Progress

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The LULU filter is a relatively new digital signal processing (DSP) filter algorithm. It is described as an efficient and effective digital filter of impulse noise that may otherwise degrade a signal. Although it has been used to improve the quality of spotty images, there is no evidence in the literature of its use for biomedical applications, such as electrocardiograms (ECGs) (“heart waves”) or electroencephalograms (EEGs) (“brain waves”). We have proposed a project where the LULU filter will be incorporated into an embedded system, thus implementing a physical realisation of this filter. We will compare its use with both the LULU filter and the common median filter, both as a simulation and as a realisation. In this presentation, we will provide an update on our progress.

Leadership Within the Emergency Department Nurse Practitioner Role

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Nurse practitioners are experienced nurses who gain higher education to practice within an advanced, autonomous scope of practice. They work in many clinical specialties, bringing a significant knowledge and expertise which positions them well to influence clinical practice within teams. This research focused on emergency department (ED) nurse practitioners. A qualitative descriptive study was completed to gain understanding of the experiences and perceptions around the complex factors that impact on nurse practitioners' roles in this clinical environment. Ten nurse practitioners currently working in ED across New Zealand took part in an online, asynchronous forum. Thematic analysis of data was undertaken which resulted in three themes. This presentation will focus on the thread of nurse practitioner leadership that was woven throughout these themes. It was clear that there were many aspects within the participants' current roles where leadership was evident, including opportunistic occasions as a resource person and the more formalised responsibilities as part of their scope of practice. However, their ability to consistently enact leadership and the potential for growth in this area were influenced by existing leadership structures within healthcare and ED models of care. The findings of this research drew the further conclusion that ED nurse practitioners would like to gain experience and confidence to be involved in leadership at national and governmental levels to promote the profession as whole. Recommendations for improving leadership within the role included the development of ED specific competency frameworks for nurse practitioners, focusing on specific interests to create leadership opportunities, and promoting a collective voice at national planning level. Recognising and developing leadership standing and capability within nurse practitioner roles in the ED setting is important not only for individuals in their careers but also for increasing the number of nurse practitioner roles within this clinical specialty.

Winning, Doing, Finishing: An Account of Externally Funded Research, with Some Pointers for Colleagues

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In September 2023, the presenters were invited by Ako Aotearoa - National Centre for Tertiary Teaching Excellence to apply for a pool of contestable funding addressing 'broader' and 'targeted priorities.' The funding to a maximum of \$50,000 per project was to be matched by an in-kind, or cash contribution from the researchers' organisation. The submission was successful, and the purpose of this presentation is to share what we learned along the way. Our project drew on an existing body of research related to older persons' healthcare in Aotearoa New Zealand, as well as previous use of kaupapa Māori research methodology and Cultural Lens theory. The inquiry sought to probe the practices deemed most effective in delivering educational experiences that prepare student nurses for culturally centred work with older people accessing healthcare. We considered how cultural identity, *ōritetanga* (equity), and Te Tiriti o Waitangi-based guidance for practice were embedded in the Bachelor of Nursing programme and were evident in student evaluations following clinical placements. We also sought to gather narratives from students and older people about specific interventions and experiences related to culture and a sense of home, that had had positive health and wellbeing outcomes. Our process entailed a literature review, document and policy analysis, evaluation, interviews, narrative inquiry, and learning and teaching resource development – particularly related to our targeted Māori and Chinese population groups. Excitingly, our findings have confirmed the value of the text and audio-visual resources we have created as outcomes for our research, and we look forward to sharing these with colleagues and opening a discussion of how this model might work in other disciplines and contexts

AI in Vocational Education: Pedagogical Support vs Academic Literacies

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In mid-2023, a series of participatory action research (PAR) projects was undertaken to investigate the integration of Generative Artificial Intelligence into courses. Through these projects, we identified, utilised and evaluated a range of AI tools/apps to support learning across courses (between levels 4 – 7) in construction management, computing technology (ICT), graphic design, hospitality and tourism management, and nursing. What we found was that the selection of learning outcomes to be supported by AI could be based on mirroring authentic AI industry practices; using AI to enhance pedagogy and help kaiako prepare resources for learning; and/or assisting with the development of academic literacies (i.e. reading, writing, information evaluation etc.). This year, PAR projects are being conducted with level 1 to 4 courses. Included are ākonga completing level 1 NCEA and English as Second Other Language (ESOL), level 2 Te Reo Māori, and level 3 and 4 foundation/bridging programmes. Therefore, 2024 participating courses have an emphasis on attaining academic literacy. It is important for these learners to use AI as a learning tool and not just as an easy way to provide them with ready-made answers. Gen AI can be used to support the diverse learning needs of ākonga but needs to be well-designed to ensure that the learning objectives of our bridging/foundation courses are met. In this presentation, a comparison between the deployment of Gen AI in 2023 into diploma/degree level programmes and in 2024 into foundation/bridging programmes is undertaken. Across both years, learning design and pedagogical foundations are important prerequisites underpinning the careful introduction of Gen AI in vocational education. Holistic programme design, level of learning and disciplinary contexts are also important factors to consider. Additionally, Gen AI must be utilised equitably, with an understanding of the ethical considerations (including aspects of indigenous sovereignty) surrounding Gen AI introduction and use.

Learning to be Reflexive in Research

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Reflexivity as a concept is the practice of allowing the researcher to address their subconsciousness, bringing it into awareness. It could be considered a step deeper into oneself, more than reflection. It is an action potentially embedded within experienced researchers, but how can you build it when you start out as a researcher? This presentation looks at the more than three year process of learning reflexivity that a doctorate candidate (me) has taken as an emerging researcher. Through a narrative inquiry approach the doctorate looks into the Professional Identity Development within Tertiary Educators. It has two parts: the Inquiry Project focuses on the research questions, and the Me Project focuses on the development of me. This presentation, supporting the Me Project, covers three stages: learning about, learning to do, and learning to integrate reflexivity. The presentation introduces a self-designed Reflection and Reflexivity framework used as a guide for instilling reflexivity into my own practice. In 2024, the newest stage of integration started; however, there are future questions for me to explore with your involvement.

Funding Local Food System Development: The Problems of a Market-Driven Funding Approach

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Problems associated with funding for local food system NGOs emerged from research done in 2019 in Providence, Rhode Island, USA, for a Fulbright Scholarship. Informal discussions with similar NGOs in Aotearoa suggest similar problems occur here, although this paper only focuses on the Providence research. 30 semi-structured interviews took place with representatives of a wide range of organisations directly involved in the thriving local food system in Providence. The research approach was based on Phronetic Social Science developed by Flyvbjerg (2001) for case study research. Participants were asked how well the local food system was doing, what power relationships were at play and what issues they were facing. Problems with funding approaches emerged as a common theme during many of these interviews, with several interconnected sub-themes developing. For example, well-established NGOs, with paid staff who focused on the administrative requirements for applying for funding tended to receive high proportions of available funding, leaving smaller, newer organisations struggling. Also, funding tended to require an organisation to be constantly growing and developing new initiatives, so it was difficult to get funding to sustain what had already been developed. This paper explores these and other subthemes, examining how the approaches used by funders tends to drive the NGO sector into duplicating the current, market-driven economic system which is based on continual growth and competition. It argues this may not be the best approach to funding the NGO sector and briefly discusses how local food NGOs in Aotearoa often depend on external funding, with some voicing similar issues to those voiced in Rhode Island.

How do Practice Doctoral Journeys Bring About Learner Transformation?

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The concept of transformation lies at the heart of professional practice research. The professional practice journey that learners experience in Otago Polytechnic's 7-year-old Doctor of Professional Practice programme (DProfPrac) embodies moments of transformation and positive change. Candidates become aware of their changing practices – as practitioners and as researchers – through the reflective methods within the programme's heutagogical structure, that is, its signature facilitative mentoring for experienced professionals drawing on their own practice journeys to generate new knowing for themselves and others. The significance of the session lies in demonstrating the power of reflectivity as a strategy to understand learner transformation and agency and ongoing researcher autonomy. The session we present here is a praxical Socratic dialogue between an academic mentor and two late-stage learners. It is Socratic in that the praxis of our presentation engages with aphoria (doubt and ambiguity), ethics (critical morality), and elenchus (interrogating presumptions) as well as a regard for co-negotiated constructivist situated knowledge. It is praxical in that it explores a research: practice nexus with reflectivity as a link. The research embedded in our presentation addresses the question in our title and aims to explore facets of transformational change in theory as they play out in experienced reality. Our method of presentation is a communal autoethnography, but behind the presentation lie reflective methods of documenting practice that the candidates carry within themselves and their deep awareness of key themes in their transformation journeys. In terms of results, we explore autonomy and agency, demonstrating how reflectivity and reflexivity enable learners to access fresh views of themselves as change agents and capable researchers. The presentation uses no PowerPoint: the first presenter interviews the other presenters about the theme of transformation as they experience it on their doctoral journeys.

Development of Cold Chain Logistics of Dairy Products in Nanjing Using Analytical Hierarchy Process

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This study aims to identify significant challenges and limitations in the existing Cold Chain Logistics (CCL) for dairy products in Nanjing, China. Using the Analytical Hierarchy Process (AHP) framework, it aims to propose viable alternatives for the improvement of dairy CCL operations in the region. In this quantitative inquiry, judgmental sampling was used to collect data through 15 AHP-structured questionnaires distributed to logistics professionals such as managers, consultants, and employees operating in the dairy industry in Nanjing. Data was analysed using the AHP approach to determine the relative importance and impact of the criteria included in the study. The AHP method involves comparing criteria through pairwise comparison to calculate numerical weights, which are then aggregated to prioritise the decision alternatives, aiding in complex decision-making. Findings reveal that technology is the most critical criterion, accounting for 47% of the challenges faced by the dairy CCL sector in Nanjing. This is followed by industry practices, which contribute to 29% of the limitations. Government policies, at 15%, also play a significant role, while infrastructure issues account for the remaining 9 %. These proportions highlight the areas where improvements are most needed in dairy CCL operations in Nanjing. In conclusion, the research highlights that technological deficiencies are the primary challenge for dairy CCL development in Nanjing. The results recommend integrating IoT technologies like Radio Frequency Identification (RFID), Global Positioning System (GPS), and Geographic Information System (GIS) to improve information exchange. Furthermore, the findings indicate the need to strengthen third-party logistics (3PL) operations to streamline dairy CCL processes in the region.

BIM Data and Sustainable Building Digital Twin Framework: Preserving the Past, Managing the Present and Predicting the Future

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This research presents a framework used to develop The Ara Polytechnic College of Architecture Studies building “Kahukura” which is Green Building certified. This framework integrates the development of a smart building digital twin by utilizing Building Information Modelling (BIM) and its BIM maturity levels, including Levels of Development (LOD), eight dimensions of BIM, Heritage-BIM (H-BIM) and Facility Management BIM (FM BIM). The research also outlines a structured approach to building performance analysis and integration with the circular economy, encapsulated within a five-level digital twin framework. Starting with Level 1, the Descriptive Twin provides a live, editable visual replica of the built asset, allowing for specific data inclusion and extraction. Advancing to Level 2, the Informative Twin integrates operational and sensory data, enhancing data verification and system integration. At Level 3, the Predictive Twin utilizes operational data to generate insights and proactive management suggestions. Progressing to Level 4, the Comprehensive Twin simulates future scenarios, enabling robust “what-if” analyses. Finally, Level 5, the Autonomous Twin, represents the pinnacle of digital twin evolution, capable of learning and autonomously acting on behalf of users.

Embracing a Comprehensive Skillset in Vocational Education: A Curriculum Redesign for Culinary Arts

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For the past two decades, critical pedagogical discourse has emphasised the need to shift vocational curricula from a technocratic focus to one that integrates a broader range of skills. The persistent adherence to technocratic philosophies in vocational education has been criticised for inadequately preparing learners for the multifaceted and diverse challenges of contemporary workplaces. This session presents the curriculum and pedagogical redesign of a Certificate in Cookery programme, showcasing its transition from a predominantly siloed technocratic approach to one that fosters learners' self-confidence in their practice and an awareness of, and integration with, the practices of others. The project aimed to address vocational education skills gaps by exploring new ways to conceive and construct a culinary arts curriculum through the integration of contemporary vocational and culinary arts pedagogical research into its programme design. Methodologically, the project involved a qualitative analysis of existing vocational education and culinary arts curricular literature to inform the redesign of courses that emphasise deliberate practice, team-based activities, sustainability awareness, and problem-solving exercises. The project is still in its early phase, but initial anecdotal feedback from both ākonga and industry stakeholders indicates increased levels of self-awareness in ākonga teamwork abilities, sustainable practice applications, and problem-solving skills. This feedback suggests that adopting a more holistic approach to vocational education can better equip culinary arts ākonga with the diverse skill set required for success in the hospitality industry. The project has the potential to inform broader vocational education curricular reforms, promoting a shift from technocratic to more inclusive, skills-oriented pedagogies.

The Role of Intrinsic Motivation to Take Part in Kī-o-Rahi

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Physical activity is well-known for its positive health effects, including disease prevention, weight management, and psychological well-being. Although Māori were previously found to have comparable physical activity rates to Pākehā/European New Zealanders, a decline in Māori physical activity levels has been reported (from 54.8 percent in 2006/2007 to 49.8 percent in 2013/2014). Recent initiatives have emphasized the need for culturally tailored public health approaches to improving physical activity rates for Māori. One such community-oriented initiative is focused on Kī-o-Rahi, a traditional ngā tākaro (Māori sport), which provides the potential means for improving health outcomes and promoting mātauranga Māori (Māori culture and knowledge). This cross-sectional survey explored participants' motivation to take part in Kī-o-Rahi. Data was collected during and following a community Kī-o-Rahi tournament (n = 34; 12 women, 22 men). Participants were approached during rest periods between games. A total of 16 participants agreed to complete the pen-and-paper Behavioural Regulation in Sport Questionnaire, and a further 18 participants completed the online version of the survey. Out of a total of 34, 24 participants identified as Māori. Results showed high intrinsic motivation for Māori and non-Māori athletes, indicating that Kī-o-Rahi meets key psychological needs and is perceived by participants as being highly enjoyable. Specifically, the mean intrinsic motivation level reported on a Likert scale of 1 to 7 was 6.7 (SD = 0.5). These findings support Kī-o-Rahi's potential as a health intervention for Māori, underscoring the importance of intrinsically motivating ngā tākaro (Māori sport) to promote physical activity and reduce health disparities. Future rangahau (research) could qualitatively investigate the mechanisms responsible for the high intrinsic motivation levels reported in the current study. More broadly, research is also needed to determine the long-term health impacts of Kī-o-Rahi and its broader application in public health strategies.

Carbon Cutting : Everyone Wants to Save the World... No One Wants to Do the Dishes

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This presentation surrounds the use of action research as a tool to enable efforts to reduce the carbon footprint of Otago Polytechnic's commercial kitchen activities. A collaboration was formed between second-year Bachelor of Culinary Arts students, the Otago Polytechnic commercial catering division, the Otago University Sustainability Department, and external consultants Carbon Positive. This partnership led to the development of an innovation lab focused on sustainability issues from a design and customer-centred perspective in an effort to begin providing solutions to the larger ecological issues facing the sector. The process began with securing funding for baseline calculations of carbon emissions in the commercial kitchens at the Otago Polytechnic. Consultants from Carbon Positive provided specialist knowledge, aiding in the calculations and these aligning with Scope 1 through 3 emissions evaluation frameworks. These baseline calculations provided a starting point for Otago Polytechnic's second-year Culinary Arts students to develop carbon-reduced menu options for the commercial catering division. The dishes were prototyped on a small scale before being scaled and forming the menu for a dining hall takeover to offer a carbon-reduced dining experience. The success of this dining experience was measured and contributed to an empirical dataset viewed from a consumer perspective. The calculation of carbon reduction and understanding of the carbon footprint was conducted in collaboration with the University of Otago, utilizing data from Carbon Positive. This facilitated a smoother transfer of knowledge regarding sustainability in the catering sector between the two institutes. The resulting menus and datasets, including consumer feedback and carbon reductions, were scaled for higher volume production and provided to the university catering sections to be implemented into their menu rotation as part of their carbon reduction efforts. The presentation aims to show the advantages of utilising different institutions' skill sets collaboratively when trying to tackle significant issues.

Reflection on Using Generative AI in Tertiary Education: The Case of a Project Management and Marketing Course

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Generative AI is revolutionising educational methodologies, especially in guiding students through Level 7 Industry Projects in Business. This integration enhances personalised guidance, fosters independent learning, and improves project outcomes. Generative AI offers tailored feedback, resource suggestions, and step-by-step assistance from project conceptualisation to execution. A significant advantage of AI is its ability to provide personalised guidance, adapting to individual learning paces and styles, thus ensuring timely support beyond traditional instructional constraints. AI-driven tools assist in identifying relevant literature, developing research questions, designing methodologies, and analysing data, thereby enhancing the quality and depth of projects. AI promotes independent learning by acting as a mentor, helping students develop critical thinking and problem-solving skills. Interaction with AI encourages students to ask better questions, refine ideas, and approach problems from multiple angles, fostering a mindset geared towards continuous improvement and innovation. Consistent and immediate feedback from AI helps students stay on track, reducing errors and increasing the likelihood of producing high-quality projects. However, integrating AI into these projects presents challenges, including ethical considerations such as data privacy and the risk of AI replacing human judgement. Ensuring AI serves as an aid rather than a replacement for human mentorship is crucial. Continuous monitoring and refinement of AI systems and outputs are essential to meet educational standards and truly benefit students. The role of the academic adviser remains vital in this AI-supported environment. Advisers help students engage critically with AI's output, ensuring they not only consider AI guidance but also question and understand the reasoning behind it. This critical engagement fosters deeper learning engagement and ensures that students develop their analytical skills. In conclusion, generative AI holds significant promise for enhancing educational experiences and outcomes in Level 7 Industry Projects in Business. By providing personalised guidance, promoting independent learning, and improving project quality, mentors and AI can together transform how students approach complex projects. Careful consideration of ethical issues, ongoing refinement of AI tools, and the crucial role of academic advisers in guiding critical engagement are necessary to fully realise AI's potential while maintaining essential human elements in education.

Making Time to do Collaborative Research as a Working Team (and Enjoying It)

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“We need to research that!” is an often-heard plea from professionals pursuing continuous improvement in work across a range of sectors. Yet, despite this enthusiasm – typically reinforced by external demands for research outputs or the determination of “best practice” – the task often feels overwhelming to small, busy teams. Both practitioners and educators can feel frustrated at continually having to relegate empirical passion for investigating “what works” to the more immediate demands of frontline work and administrative tasks. We in the Social Work team at Ara Institute of Canterbury wanted to know more about the experiences of the graduates of our Professional Supervision PGCert. More specifically we wanted to better understand the impact of the programme on the subsequent practice of these graduates. This way, we argued, we could better attune future programme content to learner needs. Being a small busy team, we sought to overcome our reluctance by inviting the participation of all colleagues who felt inspired, at whatever level they wished. While the project had clear leadership and coordination, all members of the research team were able to play the part they wanted and had a voice in both the direction of the enquiry and the evolution of the data analysis. As a relatively novel approach to doing research, there were challenges along the way for both task and team with the flat hierarchy itself proving both asset and liability. However, this process proved ultimately satisfying, enjoyable, and successful. Our presentation is a reflective account of this collaborative journey, relating both the evolving process of the research and the individual experiences of team members. We intend it as an informative and hopefully inspirational account of how the work unfolded. In this way, we hope to inspire others to joyfully wade into researching everyday questions about practice.

How Aeronautical Engineering Tutors Manage Their Emotions at Work

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My research aim is to explore how tutors manage their emotions and well-being, specifically through times of unsettling, changeable conditions in the workplace. The recent Te Pūkenga moratorium was an example of a mandated organisational transformation that upended the status quo for all concerned. While many tutors continued to deliver high-quality programmes, a number of tutors left the teaching profession entirely. I began to consider how tutors dealt with the challenges they faced. To understand the personal, situational nuances influencing tutors' decisions and behaviour I selected qualitative research methodology. My projected participant sample size is eight invitees, who each have a minimum of two years of tutoring experience in their field. Open-ended, semi-structured questions in one-to-one interviews with each participant are the method I believe is best suited to generating in-depth, rich data on their experiences of teaching and personal emotional management. Open-ended questions should facilitate any findings to come from deeply reflecting on the data forthcoming. Through this reflexive, thematic interpretation and analysis, I anticipate that my approach will identify and develop meaningful patterns that can be further explored and understood. The research findings may point to useful and important insights into how tutors manage their emotions and indicate where there may be areas for improved awareness to be developed. With this, tutors and employers may be able to design and implement more robust self-governance tools for tutor wellbeing, which could also be disseminated to a wider tutor base. If this is the case, my hope is that the dissemination of such a toolkit will promote enhanced employee well-being, leading to increased job satisfaction and employee retention. The value of our training institutions and confidence in our tertiary training future stand to benefit. After the past two years of insecurity around our institutions, these benefits are urgently needed.

Collaborative Poetry for Empathy and Reflection

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This presentation describes the integration of various innovative poetry activities in the second-year undergraduate nursing course at Otago Polytechnic. These activities are designed to develop reflective practitioners who make sense of their own feelings, their professional practice, and episodes of care. Academic and clinical educators desire an invigorated learning space, that exemplifies effective pedagogy and experiential learning. The “flipped classroom” involves deliberate decluttering and redesign of the teaching space to enhance engagement with content and creative thinking, but how do we practically “flip” classes to demonstrate “teaching excellence” and achieve our aims? Collaborative poetry activities in the classroom include co-construction of collective poems, “found” poetry (crafted from students’ words), ekphrastic poetry (written while observing an object) and review of poems written by health consumers and health professionals. Patient use of health metaphors is also explored to foster appropriate responses to these. Students written evaluation of these activities reflects the courage and self-awareness that collaborative poetry fosters. Anecdotally, learners “cherish” their poems, some reading them aloud ahead of their first day in an aged care facility, carrying them in their pocket or laminating them. The poetry has become a vehicle for the active identification of feelings that later inform empathic care. These activities are sustainable and cater for diverse learning styles. It is hoped that this presentation will inspire delegates to expand their own creative toolbox to include poetry activities. Discussion will include challenges encountered, including anonymity, ownership, and personal courage. This work is important as it is transferable to other settings as a means of “flipping the classroom” into an interactive space, in the interests of the facilitation of learning.

Integrating Industry Insights for Enhanced Project Management Education: A Longitudinal Study at Ara

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This research project aims to enhance teaching and learning in the business department at Ara by leveraging industry insights to drive educational improvements. Emphasising teaching excellence, the project aligns with Goode's (2021) Teaching Excellence Framework, which highlights five significant areas of teacher excellence. Guided by Timperley, Kaser, and Halbert's (2014) spiral of inquiry, the research prioritises student needs, enhances learning outcomes, promotes student agency, fosters well-being, and personalises learning experiences. The research asks: How do practising project managers in Canterbury perceive the project management discipline and its practical application in the local industry? This study involves conversations with industry professionals identifying critical project management skills, tools, and techniques required in Canterbury. Initially, five practising project managers who served as class guest speakers were informed that their contributions would be used for research purposes before transitioning the guest lectures to semi-structured interviews with students present. Using snowball sampling, the initial five speakers were invited to recommend other project managers. The objective is to interview four practising project managers per semester from 2024 to 2029. The interviews collect comprehensive insights into the careers of project managers, the types of projects they have managed, and the challenges they have faced. Thematic analysis will be used to analyse the data, identifying patterns and themes. Initial results indicate that while new project managers need a basic understanding of traditional project management tools, soft skills, especially those related to dealing with people, are regarded as the most crucial aspect of project management. By integrating industry feedback and fostering direct interactions between students and professionals, this research supports Ara's project management education to remain relevant and effective. The study will track postgraduate student employability rates or internships in project management roles, comparing those who participated in the interviews with those who did not.

Making Excellence Authentic: Kōrero with Doctoral Mentors

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‘Excellence’ is not a neutral concept; rather, it is a contested one depending on whose perspective envisages it. Clearly, a learner’s experience of excellence differs from those of educators. Equally, managers, because of their roles as agents of organisations, have to buy into top-down conceptions; conceptions that may be more aligned with the representations of excellence as a commodity that marketing specialists peddle to learners. This discourse positions excellence as competitive advantage because of ‘our’ rankings and reputation. It is a vested view, and critical educationalists see quantified excellence as fetishised in educational sloganeering: Excellence R Us. Understandings of excellence, then, depend on to whom you talk/kōrero, and in this paper I present small-scale, qualitative, interpretative data from five mentors on a professional practice doctorate programme in Aotearoa/New Zealand. This paper finds its gap and line of enquiry from my professional practice as a postgraduate educator in Australia and New Zealand, where I see a problem in key stakeholders’ – learners, educators and representatives of the organisation – varying stakes in ‘excellence’. I explore what doctoral mentors, who are an experienced subset of the educator group, understand ‘excellence’ to be in terms of their work as mentors. After critically discussing perspectives of excellence in educational literature, I present highlights from kōrero with five experienced mentors. Their perspective of what excellence means in their practice brings findings in the areas of heutagogical practice, cultural being and understanding, communication styles, ability to wear multiple hats from coach to timekeeper and empathy. Ultimately, I suggest ‘authentic’ excellence is a bottom-up, affective, quality-related concept closely aligned to the researched concept of ‘teaching well’ and figured by how mentors feel about their experiences with learners. These insights promise to resound with all educators in postgraduate vocational spaces.

Māui te Pūkenga: The Evolution of the Expert Kaiako

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This project, undertaken by tangata whenua and tangata tiriti, explored the experiences of ten Ara kaiako with Māori culture and how these experiences influenced their journey to becoming Pūkenga. A Pūkenga was initially considered to be an expert kaiako/teacher; however, through the project the research team came to consider a Pūkenga to be a critically conscious, transformative practitioner. The project revealed a range of actions undertaken by the participants were instrumental in them becoming a Pūkenga. These included: implementing culturally responsive pedagogies; reframing their mindset; acknowledging bias; and developing a focus on indigenising practice. The participants, all tauwiwi, partnered with the lead researcher in the co-creation of fifty vignettes through a collaborative narrative inquiry approach. Analysis identified experiences with Māori culture enacted with care and warmth were influential in the process of them becoming a critically conscious, transformative practitioner. In response to Hoskins and Jones' call for a "normalisation of indigenous ways of being and knowing" in the tertiary sector, this finding has been further considered through the concept of aroha. As a project with tangata whenua, Te Ara Tika (2010) values were woven through our relationships with each other and the participants.

Exploring the Impact of Imposter Phenomenon among Kaimahi and Identifying Support Opportunities at Otago Polytechnic

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This research aims to explore and understand the impact of imposter phenomenon (IP) on kaimahi at Otago Polytechnic. In a work context, IP describes the feeling of not being good enough for your role, that you have ‘tricked’ your way into the role or gained the role by luck. Those who experience IP may use it as a motivator; it can push individuals to take risks, and productivity can increase. However, for some individuals impacted by IP, it can have the opposite impact; IP can decrease motivation and lead to self-sabotage. Competitive environments, like tertiary education organisations, can foster the feeling of being an imposter. The methodology for this project is qualitative description (QD) overlayed with autoethnography. Data collection will involve semi-structured interviews with Otago Polytechnic kaimahi. QD will encourage descriptive data that will provide deep insight into the impact of the imposter phenomenon. Woven through this description will be the researcher’s autoethnographic approach. At the time of attending OPSITARA, the data collection will be complete and reflexive thematic analysis will allow an indication of results to be presented. The outcomes of this research will increase the understanding and visibility of IP and encourage Otago Polytechnic to have resources and support available to those impacted by IP. This will result in kaimahi who are affected by IP knowing they are the right person for their role, they have not tricked anyone, and they possess the skills and the expertise to execute the tasks they are employed to complete. My research is exclusive to Otago Polytechnic, but I anticipate the outcomes of my research will be applicable outside of this workplace and be transferable to other industries outside of tertiary education.

Complexities of being Māori

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I am a Māori Facilitator with Capable New Zealand who specialises in working with Māori cohort ākonga. I am in my last year of my Master of Professional Practice with Otago Polytechnic. My research is focused on how facilitators can better assist Māori ākonga completing the Bachelor of Applied Management Degree at Capable New Zealand. The research adopts a qualitative approach, underpinned by Kaupapa Māori values. I used the thematic analysis method to analyse interviews with Māori ākonga and facilitators who had completed or facilitated this degree. I want to focus on the following 2 key thematic findings of 'Whānau first' and 'Paper Māori', from my analysis. 1. Whānau First: Māori ākonga work to a whānau first philosophy, which often means they prioritise themselves much lower, and therefore sometimes they struggle to complete their degree because the collective whānau are given the highest priority. Developing an understanding of how to apply a different lens to the whānau first philosophy, will help support and assist facilitators and ākonga to accept that by completing a degree the ākonga will mana enhance their whānau. 2. Paper Māori: Māori who were born before 1990, were predominantly raised in mainstream New Zealand as a legacy of colonisation. They may have an appreciation for Te Ao Māori, but don't always feel they fit in either world. By using my own ethnographic experience alongside my research findings, I will share how one can experience shame and embarrassment as a child of this era who feels not Māori enough to own your cultural identity, resulting in a sense of being alone and isolated. Through this research, I have found my voice to better support my ākonga, and I look forward to sharing these insights with my fellow kaimahi.

Reflection on Using Generative AI in Tertiary Education: The Case of a Project Management and Marketing Course

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This research project aims to enhance teaching and learning in the Business department at Ara by leveraging industry insights to drive educational improvements. Emphasising teaching excellence, the project aligns with Goode's (2021) Teaching Excellence Framework, which highlights five significant areas: reflecting on practice, creating empowering learning environments, facilitating learning, building relationships, and focusing on learners. Guided by Timperley, Kaser, and Halbert's (2014) spiral of inquiry, the research prioritises student needs, enhances learning outcomes, promotes student agency, fosters well-being, and personalises learning experiences. The research addresses the question: How do practising project managers in Canterbury perceive the project management discipline and its practical application in the local industry? This study involves interviews with industry professionals to identify critical project management skills, tools, and techniques required in Canterbury. Initially, five practising project managers served as guest speakers in the AMPM700 class. Ethics approval has been obtained from the Ara Ethics Committee, and all guest speakers were informed that their contributions would be used for research purposes before transitioning the guest lectures to semi-structured interviews with students present. Using snowball sampling, the initial five speakers were invited to recommend other project managers. The objective is to interview four practising project managers per semester from 2024 to 2029. The interviews collect comprehensive insights into the careers of project managers, the types of projects they have managed, and the challenges they have faced. Thematic analysis was used to analyse the data, identifying patterns and key themes. Student participation is voluntary, and their privacy is protected, as their questions are not recorded or used in the research. Initial results indicate that while new project managers need a basic understanding of traditional project management tools, soft skills, especially those related to dealing with people, are regarded as the most crucial aspect of project management. By integrating industry feedback and fostering direct interactions between students and professionals, this research ensures that Ara's project management education remains relevant and effective. The study will measure success by tracking post-graduate student employability rates or internships in project management roles. This continuous cycle of inquiry and collaboration drives positive change and fosters a culture of curiosity and innovation in teaching and learning environments.

Machine Learning Rules Interpretability: Critical Perspectives for Postgraduate IT Students

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The aim of this research is to foreground the application of Critical Thinking (CT) to the interpretation of Machine Learning (ML) rules, by developing Postgraduate IT students' awareness of concepts such as ML rule interpretability, cognitive biases, and debiasing strategies. Artificial Intelligence (AI) is widely being used to generate complex ML rules from massive data sets using a variety of complex algorithms and data structures. The resulting ML rules feed into business decisions, whose deeper consequences may be obscured by the extensive complexity of such AI systems being treated as a "black box" of hidden workings. Critical Thinking, as a crucial part of postgraduate teaching, supports teachers and students to question the assumptions underlying the interpretation of ML rules, and to develop an appreciation for the logical, cognitive and statistical issues of ML rules interpretability. Qualitative data from secondary research of a scoping literature review in the field of Machine Learning and cognitive science was explored for key themes and issues to inform critical insights into common cognitive biases and potential debiasing strategies that might enhance the interpretability of ML rules. A focus on literature from 2020 onwards was motivated by the rapid advancements in the AI field. Provisional findings from the literature reveals the existence of various types of common cognitive biases, notably confirmation bias and primacy effect. There is also evidence of a ML rule interpretability/accuracy trade-off issue which is an important consideration when attempting to apply debiasing strategies. The implications for academics include the challenge to help students to explore the "black box" of AI, apply logical and statistical knowledge to ML rules, navigate their cognitive biases, grasp debiasing techniques and navigate the interpretability-accuracy trade-off.

Early-Stage Company Valuation in New Zealand's Equity Crowdfunding Market

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Promoters of equity crowdfunding (ECF) companies can explain their company's valuation to reassure investors and reduce information asymmetry. Company promoters may name the valuation approaches used and provide supporting information such as audited accounts, details of peer companies, or details of prior funding rounds. However, only standard risk warnings are mandated in equity crowdfunding, and all other disclosures are discretionary. This paper reviews ECF valuation disclosures and raises concerns about the level of detail provided and the exclusion of value-relevant factors, including differential voting rights and non-financial sources of investment return. Around one-third of sample companies did not explain how the company was valued. Companies that discuss valuation are highly variable in the quality and quantity of disclosure. The most common valuation model used by ECF companies is a multiple of forecast revenue. Although this corresponds to recommended best-practice, only a single accounting multiple is used in most cases, and forecasts are based on limited financial history from unaudited accounts. An alternative qualitative valuation model is developed so investors can compare new ECF offers with prior offers as a reasonableness test. Companies are assessed on business development, customers, employees, funds sought, governance, and revenues to classify the company as (i) proof-of-concept, (ii) seed, (iii) start-up, or (iv) early expansion. Benchmark values are reported for each classification.

Understanding Dominant Entrepreneurial Theories' Presence in the Real World

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This study investigates the phenomenon of immigrant entrepreneurship, based on recent immigrants' entrepreneurial experiences, aiming to develop an updated theoretical framework. Research on immigrant entrepreneurship has evolved alongside the changing profiles of immigrants, many of whom now aim to become entrepreneurs. Unlike traditional immigrants, recent immigrants typically bring new qualifications, skills, and resources. While traditional theories and models, such as cultural theory, middleman theory, and disadvantage theory, have been developed to explain immigrant entrepreneurship, these perspectives are increasingly seen as outdated. Factors such as geographical limitations, cultural insensitivities, and economic constraints contribute to the need for reconsideration. This research uses a case study approach, including 30 semi-structured interviews with current immigrant entrepreneurs. Existing theories are reduced into measurable constructs, assessing their relevance in modern contexts. The paper synthesises key arguments from various relevant theories to explore the relationship between immigrants and entrepreneurship. This research developed an Indian immigrant entrepreneurship (IndIErp) model, explaining the transition process of current Indian immigrant entrepreneurs (IndIErs) into entrepreneurship. The research highlights how Indian immigrants integrate into and contribute to New Zealand's entrepreneurial sector. The findings are valuable for policymakers, including the Immigration Department, the Chamber of Commerce, the Ministry of Business, Innovation, and Employment (MBIE), and other relevant agencies. The study provides vital insights for aspiring immigrant entrepreneurs, social researchers, and those exploring entrepreneurial theories. Further research is needed to address specific gaps in the existing literature and explore immigrant entrepreneurship nuances in different contexts.

Education Experiences of Māori Veterinarians and Veterinary Nurses in Aotearoa

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Māori are significantly under-represented within the veterinary sector. There appears to be no literature exploring the experiences of Māori veterinarians and veterinary nurses. The aim of this study was to explore, through narrative enquiry, the experiences of Māori veterinarians and veterinary nurses. Seven veterinarians and six veterinary nurses who whakapapa Māori participated. Using semi-structured interviews, researchers explored participants' journeys into the veterinary sector, experiences within the sector and opportunities for the sector to increase Māori representation. Interviews were transcribed and analysed using inductive thematic analysis. Participants were given the opportunity to provide feedback on the themes to: (i) increase the agency of the participants; and (ii) support critical engagement with the researchers' interpretations from the participants mitigating the researchers own cultural lens in interpreting the data. The participants' conversations revealed some common themes. Participants were attracted to the sector through experiences engendering positive connection with animals. The participants' journey into formal education was typically circuitous, often due to whānau needs and preferences, or being directed away from the veterinary sector by formal educators. All participants discussed experiencing classrooms without diversity in veterinary education. Participants from veterinary science described feeling comfortable in a Eurocentric environment; however, they were not able to 'be Māori'. In contrast, veterinary nurse participants were more often brought up in a Māori world and described the lack of Māori in their veterinary nursing education challenging. All participants noted a lack of te reo Māori, tikanga and Te Tiriti o Waitangi in the curricula. The researchers hope the findings in this study can support increased attention toward Te Tiriti o Waitangi and subsequent inclusivity for Māori in the veterinary and veterinary nursing education sector. Ultimately, the study hopes to contribute to the broader aim to support an increase of Māori representation in the sector.

Addiction Support Work and Job Satisfaction: An Examination of Intrinsic and Extrinsic Factors

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To date, there has been relatively little research on support workers in an addiction rehab residential setting and what they find satisfying and dissatisfying about the job. Two New Zealand studies have surveyed a range of occupations working in alcohol and drug settings; however, support workers made up less than 4% in one or 15% in another study. Researchers have used a variety of models to explain job satisfaction or job dissatisfaction. According to one model, intrinsic factors bring motivation to a worker; this includes the job duties, recognition, advancement, growth and development. On the other hand, extrinsic factors do not necessarily cause satisfaction, but cause dissatisfaction if not adequate. Examples include pay, supervision, peer group relationships etc. This study will use a mixed method approach; firstly a phenomenological interviewing technique to question support workers on what they find satisfying or dissatisfying in their work. It is hypothesised that more intrinsic factors will be associated with work satisfaction and more extrinsic factors with dissatisfaction. Secondly, a quantitative scale on work satisfaction, will provide a secondary measure, that can be compared to normed population data for these two variables. Standard demographic questions and the practices used by the workers to maintain wellbeing will also be surveyed.

Early Career Teachers' Journey Towards Excellence

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The 'Keys to Teaching Excellence' model (Goode, 2021) identified five over-arching keys to teaching excellence, each made up of characteristics inherent in a teacher's personality, and skills which can be developed through practice and reflection. This model was the outcome of an investigation of Tertiary Teaching Excellence Awardees, who had established teaching careers. This study explored the experiences and perceptions of early career teachers when considering the teaching excellence model, including its impacts on their practice and identity as teachers. Using a qualitative method, three focus groups were conducted including early career teachers (with 3-5 years' experience), who had transitioned from professional practice, across three tertiary institutions. Following discussion of the 'Keys to Teaching Excellence' model, participants reflected on and applied the model to their own teaching. Focus groups were semi-structured, using questions which aimed to elicit participants' perceptions of their journey toward excellence, using the 'Keys to Teaching Excellence' as a broad framework. Focus groups were recorded and transcripts thematically analysed. This presentation will report on our initial findings, identifying themes and subthemes related to the development of excellence in tertiary teachers. The study illustrates the applicability of the Keys to Teaching Excellence model to early career teachers, identifies the skills and knowledge achieved, their visions for future development, and the perceived benefits of excellence in teaching to the students they work with. The Keys to Excellence model resonated with all participants and could be applied as a reflective tool for early careers teachers as they strive forward on their journey to excellence.

Planning a Practice-Focused Inquiry in Universal Design for Learning Utilisation: Questions We Asked Ourselves

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Universal Design for Learning (UDL) is a framework with potential to support teaching and learning practices across educational contexts, notwithstanding vocational tertiary education. As three educators from two departments facilitating postgraduate programmes at Otago Polytechnic | Te Pūkenga, we meet regularly to discuss UDL and its application to enhance learning experiences of ākonga, and have invited others to join in these conversations. To explore UDL as an evidence-based practice from a pono or practitioner-knowledge perspective, we designed a study with an aim to discover more about the utilisation and applicability of the UDL framework, to ensure ALL ākonga experience positive learning pathways and outcomes. In this presentation, we share findings from preliminary analysis of our evolving conversations that were part of the initial planning stage of our larger professional practice project. It was believed this process could help us iron out any issues in the proposed 'on paper' methods. Using an action research approach, we collated transcribed data from three online research planning meetings and identified all questions and the context in which these questions were asked. Exploratory analysis was carried out utilising existent learning and development frameworks, including UDL itself. Our preliminary findings about the commonalities, variations, and patterns in the questioning, and identification of usefulness of frameworks for analysis of contextualized questions will be shared. To close, we will convey how our research helped us see how our professional conversations could be further focused, structured, and supported, how there were areas of questions we did not usually ask, and how the objective of 'universality' can be ensured. We will also reflect on the significance of our findings for practice-focused researchers interested in inclusive teaching and learning tools, the enhancement of learner agency, and the practicing of collaborative research.

Teachers' Perceptions on the Validity, Reliability, and Fairness of Assessed Tutorial as an Assessment Method: Addressing AI-Related Challenges in Designing Assessments

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This study aims to examine the perceptions of Business and Computing faculty members on the validity, reliability, and fairness of assessed tutorial as an alternative assessment method. It also aims to address Generative Artificial Intelligence (AI)-related issues on written assessments. The Schools of Business and Computing have experienced growing pressures to find alternative methods of assessment due to the COVID-19 pandemic, Cyclone Gabrielle, and ongoing pressures from generative AI. The research examined an assessed tutorial methodology to overcome these difficulties. This qualitative research utilized semi-structured interviews of faculty members from the Schools of Business and Computing. Fifteen faculty members were interviewed across two campuses at a regional polytechnic in New Zealand. Each semi-structured interview was conducted in person or using Microsoft Teams. The research has received ethics approval and primary data collection has concluded. Thematic analysis is being undertaken to determine common themes from the transcripts. Early analysis shows there is a consistency across faculty members that validity, reliability and fairness can be achieved with this assessment modality. Several faculty members mentioned the importance of moderation in achieving validity, reliability, and fairness of assessed tutorials. Results include that students with lower levels of oral skills might be disadvantaged. However, a contrasting argument emerged, that there is currently an over emphasis on written assessments. Making assessed tutorial a routinely used method of assessment across the programme could reduce learner anxiety. Interviewees suggest that assessed tutorials can be useful as part of the mix of assessment methods. Assessed tutorial can be an alternative assessment method to avoid academic integrity issues related to generative AI. Assessed Tutorials show potential to address the assessment issues outlined. This assessment methodology presents an opportunity for improvements in assessment across business and computing programmes and is an effective way of managing issues related to generative AI.

An Exploration of the Marketing Academic / Practitioner Disconnect in Australasia

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This qualitative study investigates Commercial Marketing Practitioner (CMP) perspectives of academic marketing research (AMR), with a focus on the disconnect of integration of AMR into contemporary industry practice. This research-practice-gap is acknowledged across social sciences. However, further insight is needed to comprehend the factors creating the gap to bridge the gap. Across the literature, scholars have identified the need for theory to drive practice and for practice to stimulate theory development. Both theory and practice are deemed crucial in the continuation of knowledge generation. CMPs operating in dynamic landscapes, such as digital innovation, require timely knowledge to navigate decision making in their professional discipline. 12 semi-structured interviews with CMPs in Australia (2) and New Zealand (10) were conducted utilising quota sampling to ensure a variation of industries, business size, and industry experience. Thematic analysis was utilised to reveal common themes. The results indicate AMR infrequently informs strategic decisions; however, its value is acknowledged. The relevance of AMR is not fully realised due to perceptions the internet (including sources with questionable credibility) provides the more up to date information CMPs require to stay abreast, particularly with regard to technology in a rapidly changing environment. CMPs prefer 'snackable' served up content they subscribe to for more tailored 'content'. Various online platforms, such as social media, are dominant in the dissemination of this information. The results indicate there is an opportunity to integrate the use of AMR in congruence with contemporary CMP requirements, e.g. through bite-sized content in accessible channels. A desire for up-to-date AMR was evident, with a need for guidance on decision making around innovations within the field of marketing. As the innovative information needs evolve, so too is the opportunity for the advancement of this knowledge within AMR, for the profession of marketing.

Advancing Interdisciplinary Learning in Construction Management Education: Insights from Student and Academic Perspectives

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Aotearoa New Zealand's residential construction sector must urgently address sustainability challenges and high costs, amid an unprecedented housing crisis, requiring innovative solutions that balance affordability, environmental impact, and cultural values. This study conducts a literature review and a comparative analysis of national and international case studies. Studies were selected on the basis of relevance to circular economy (CE) principles, geographic diversity, and demonstrated impact on sustainability and affordability factors, to examine the application of CE principles in the residential construction sector. Insights are further enriched by exploring the integration of Indigenous Māori concepts, such as kaitiakitanga (guardianship) and manaakitanga (care), citing the work of Durie, Harmsworth and Awatere, as well as Te Tiriti as framework for sustainable resource management. This research identifies global circular economy (CE) practices that can be adapted to New Zealand's construction sector by integrating Māori principles of kaitiakitanga (guardianship), manaakitanga (care), and whanaungatanga (connectedness), fostering a framework that balances economic, environmental, and cultural considerations to meet housing needs while promoting long-term sustainability and resilience in Aotearoa New Zealand. The research concludes that integrating circular economy principles with Indigenous Māori values provides a viable pathway to achieving sustainability in New Zealand's residential construction sector. Such an approach can serve not only to address the country's pressing housing demands but also to establish a framework for long-term environmental stewardship.

The Effect of Swim Cap Shape on Aerodynamic Drag

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Research on swim caps has focussed on the drag caused by a dome swim cap shape and male swimmers with short hair. However, unpublished research by the authors, found elite female backstroke competitors wore their hair in a low bun (87.5%) or high bun (12.5%), which does not produce a dome shape. Additionally, an Olympic backstroke gold medallist had a swim cap shape similar to an aero-helmet/ time trial cycle helmet, which has been found to significantly decrease drag in cycling. Consequently, the aim of this study was to investigate the effect of swim cap shapes (due to different hairstyles) of elite female backstroke swimmers on drag. Drag was measured in a wind tunnel set to a wind speed of 10 m/s with a Reynolds number similar to swimming at 1.76 m/s in water. Aerodynamic drag was measured on a model head with no hair or a long wig (representing a swimmer with long hair) in four swim cap conditions: No Hair/ Dome shape, Low Bun, High Bun and Aero Bun hairstyles. The model head was at a fixed, horizontal position equivalent to the head position in backstroke. Preliminary research findings were (presented from most drag to least drag): Aero Bun (53g), Low Bun (42g), Dome (36g) or High Bun (36g). From these initial findings, a high bun produced similar drag to a dome shape, whereas a low bun and aero bun produced large increases in drag relative to a high bun/dome shape (17% and 47% respectively). Therefore, a backstroke swimmer with long hair should wear a high bun to decrease drag relative to a low or aero bun. Nevertheless, the authors advise caution in the interpretation of the findings, as repeated tests are needed to determine the validity and reliability of our findings as well as statistical analysis.

Reflections on What is Aotearoa / New Zealand Culture

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The aim of this study was to reflect on what attitudes, beliefs, and values might be considered part of Aotearoa / New Zealand culture with the objective of being able to develop teaching resources that could be utilised when students are required to have an understanding of Aotearoa culture. The genesis of this research was the authors' realisation that while many courses may contain learning outcomes that refer directly or indirectly to the need for students to understand Aotearoa culture; what "is" Aotearoa culture is nebulous and at times contentious. While there is significant literature on Māori culture, and some literature on how "Pakeha" culture can be conceptualised, what literature the authors could find about a national or shared culture for Aotearoa was minimal and either grouped Aotearoa's national culture with other nation states created by European colonisation or part of a wider "western culture". The researchers started their journey to conceptualise Aotearoa culture by first reflecting on their own cultural backgrounds and how they would self-label themselves. They then reflected upon attitudes, beliefs, and values might be "shared" between their culture and other cultural communities in Aotearoa. This process of reflection involved introspection on the authors' self-identity as well as informal conversations held with others around identity. This process resulted in one researcher with both Māori and European ancestry/whakapapa identifying most strongly with the label Māori. For the other researcher whose ancestry/whakapapa was Irish settlers; the process of self-labelling had evolved over time from Irish-New Zealander to New Zealander, to Pakeha. Shared cultural values were identified as a strong relationship with the natural world, a desire for equality and the importance of hospitality. Both researchers felt that aspects of Māori culture were utilised to represent New Zealand nationally.

A Pilot Study on Stakeholder Perspectives: Integrating Mātauranga Māori in Architectural Education

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The architectural profession is undergoing rapid transformation, driven by technological advancements, societal needs, and sustainability imperatives. To ensure future architects are equipped for this evolving landscape, architectural education must respond to these shifts. This pilot study focuses on the integration of mātauranga Māori—Indigenous knowledge systems—into architectural curricula, gathering insights from key stakeholders, including Māori practitioners, educators, and industry professionals. As educational institutions strive to embed Indigenous perspectives alongside emerging technologies and sustainability principles, this research explores how mātauranga Māori is being incorporated into teaching practices and its impact on cultural competency and design innovation. The study assesses how these knowledge systems influence the professional preparation of graduates and contribute to the development of more inclusive and relevant architectural education in Aotearoa New Zealand. Utilizing a mixed-methods approach, including a literature review and in-depth interviews, this study captures diverse viewpoints on the role of mātauranga Māori in shaping contemporary architectural pedagogy. The findings will inform recommendations for curriculum development, with the aim of fostering an adaptive and culturally enriched educational environment. This research contributes to the dialogue on creating a more inclusive, sustainable, and progressive approach to architectural education, aligning with the profession's evolving needs and societal responsibilities.

Architectural History: Alternative Futures

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Recent large-scale studies into the state of architectural history education - namely the Society of Architectural Historians 2021 SAH Data Project, and the Global Architectural History Teaching Collaborative 2017 international survey – provide critical insight into current pedagogical approaches within the discipline. Evidence from these studies reveal a discipline that is caught between tradition and innovation. Traditionally, architectural history courses have relied on deductive approaches to teaching and learning, centred around lecture delivery and largely focused on the development of architecture through an inherently Western, and male, lens. Perhaps not surprisingly, several research studies also cite challenges that the discipline faces in upholding relevancy and learner engagement at a time when digital technologies, active learning and workplace relevancy are of prime importance. What could an alternative future for architectural history education look like? This presentation will discuss opportunities for a significant re-working of architectural history with a focus on inductive learning. I will draw on key findings from a literature review, alongside reflective observation and analysis of current practice teaching a first year Contextual Studies architectural history course in the Bachelor of Architectural Studies degree at Otago Polytechnic. History exists as a record of problems already solved, and emerging designers can gain fundamentally critical learning through understanding the development of architecture through the ages. My belief is that the field of architectural history should sit at the intersection of research and practice, rather than operating within purely theoretical frameworks. However, this must be carefully considered in order to balance and uphold academic rigour alongside content and activities that are contextually-relevant and engaging for learners.

Our First Mothers: Finding Space for Mātauranga in Midwifery Undergraduate Education

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The rangahau I am presenting was three pronged in its approach, firstly, to return Our First Mothers as the philosophical base of Tāpuhitanga (Māori Midwifery praxis) into midwifery in Aotearoa. Secondly, to explore Tāpuhitanga through pūrākau aligned to Māori creation narratives, to speak back and write back to the colonial hold over the inarticulate and scattered spaces of Māori in midwifery. And, thirdly, to pull forward the voices of Indigenous midwifery to inform midwifery undergraduate education in Aotearoa New Zealand. This presentation is based on my completed doctoral rangahau in 2023. The rangahau uses a Kaupapa Māori methodological approach with pūrākau in its multiple expressions as the method for the dissemination of knowledge and therefore, does not adhere to Western methods of knowledge production. Ethics approval was granted from the Ethics Board at Te Whare Wānanga o Awanuiārangi in 2020. The premise I will present is that to subsume mātauranga beneath the rhetoric of Treaty principles is a grave misconception unconsciously practiced in midwifery education. With no Māori philosophies included in the midwifery curriculum, the likelihood the midwifery education a Māori midwifery student will encounter is a curriculum which does not demonstrate our presence in midwifery. We learn we do not belong, and that we do not exist outside of Treaty-led workshops and superficial cultural safety education. This rangahau is important because it proffers a pathway for midwifery education that allows for things to be done in a right way with integrity and compassion for wāhine Māori entering the midwifery profession. Tihei Māuri Ora.

Body-Logic: Embodied Experience Through Embodied Design

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Phenomenology is often perceived as abstract and disconnected from the practical demands of architecture and the building industry. Yet, architects and other built environment professionals shape environments that profoundly impact everyday lived experiences. In phenomenology, the body is central to making sense of our environments, providing a foundation for design thinking that connects human experience with space. This balance between practicality and the creation of curated sensory environments is especially relevant in design studio pedagogy, where learning facilitators aim to mimic professional practice while upholding academic rigour grounded in theory. Embodied design emphasises physical engagement and sensory experiences in understanding and creating spaces. This study explores how design studio pedagogy can integrate phenomenological insights to foster embodied design. An interdisciplinary scoping literature review identifies design studio techniques that promote embodiment in the designer's process and practice, as well as the design's capacity to facilitate an embodied experience in the user or viewer. It specifically focuses on the design process, examining practical, body-centred techniques, such as sensory mapping and user-centred design techniques such as descriptive storyboards that enable students to experience and analyse spatial qualities through their own and others' bodily perceptions. The findings suggest that incorporating phenomenological techniques into design studio practice can deepen students' spatial understanding and enhance the experiential quality of their design proposals. This approach bridges theory and practice, offering a pathway to enrich design education with embodied phenomenology.

Balancing Sustainability with Growth: Weaving Circular Economy Practices and Traditional Indigenous Knowledge in Aotearoa New Zealand's Residential Construction Sector

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Aotearoa New Zealand's residential construction sector must urgently address sustainability challenges and high costs, amid an unprecedented housing crisis, requiring innovative solutions that balance affordability, environmental impact, and cultural values. This study conducts a literature review and a comparative analysis of national and international case studies, selected on the basis of relevance to circular economy (CE) principles, geographic diversity, and demonstrated impact on sustainability and affordability factors, to examine the application of CE principles in the residential construction sector. Insights are further enriched by exploring the integration of Indigenous Māori concepts, such as kaitiakitanga (guardianship) and manaakitanga (care), citing the work of Durie, Harmsworth and Awatere, as well as Te Tiriti as framework for sustainable resource management. This research identifies global circular economy (CE) practices that can be adapted to New Zealand's construction sector by integrating Māori principles of kaitiakitanga (guardianship), manaakitanga (care), and whanaungatanga (connectedness), fostering a framework that balances economic, environmental, and cultural considerations to meet housing needs while promoting long-term sustainability and resilience in Aotearoa New Zealand. The research concludes that integrating circular economy principles with indigenous Māori values provides a viable pathway to achieving sustainability in New Zealand's residential construction sector. Such an approach can serve not only to address the country's pressing housing demands but also to establish a framework for long-term environmental stewardship.

Confronting Sustainability: “Drops in the Ocean Still Matter”

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Teaching in the sustainability space means needing to share the evidence about the devastating effects of climate change, environmental degradation and social injustices. However, this can be deeply distressing and overwhelming for ākonga/ students. In this presentation we share our reflections on teaching in the Master of Sustainable Practice. The ākonga who come to the Master of Sustainable Practice programme come with an excitement about sustainability. However, many are still shocked by the information. Using a collaborative autoethnographical (CAE) approach, we locate our reflections in our individual biographies and cultural backgrounds and our shared insights from our teaching practice. Adopting a CAE research approach has given us the opportunity to explore our teaching strategies more comprehensively and evaluate what has worked to support ākonga and where we could develop these strategies further. This presentation will explore our reflections on effective educational design strategies. At the start of each semester, we have face to face wānanga which gives an opportunity for ākonga to share what they bring. This affirms positive personal values and fosters a sense of community to support and encourage each other. There are workshops throughout the programme based on discussions and sharing experiences and ideas which help ākonga to develop a community of practice. Te Ao Māori is embedded in the programme recognising the value and contribution of indigenous worldviews to sustainability and obligation to honour Te Tiriti o Waitangi in Aotearoa. The programme emphasises the importance of being able to feel agency – the capacity to take action. Research suggests that being able to take action is protective against being overwhelmed by feeling of anxiety and hopelessness. We reaffirm ākonga that just being in the programme and learning about sustainability is a form of action.

Carbon Frontiers: Teaching the Unknown

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New Zealand's commitment to carbon neutrality by 2050 has thrust carbon counting into the spotlight, yet the architectural field remains in its infancy. With evolving industry standards and the recently revised National Standard of Competency for Architects (NSCA) as per the Architects Accreditation Council of Australia (AACA), educators face unique challenges in teaching carbon-related concepts. This study explores the question "What pedagogical models support rapid change?" through examining teaching approaches for carbon-related concepts in a rapidly changing landscape. Through both literature review and content analysis of pedagogical strategies and tools (e.g. experiential, reflective, and inquiry-based approaches), we examine various methods of instruction and their efficacy in conveying evolving concepts. Our findings explore the potential of scaffolded pedagogical approaches in undergraduate architectural education. This method appears to help students build a foundation while gradually engaging with the uncertainties of the field. The significance of this research lies in its potential to inform educational practices beyond carbon studies. By examining strategies for teaching fluid subjects, this study aims to provide insights for educators across disciplines facing similar challenges. These findings may help guide the development of flexible curricula that prepare students to navigate emerging areas of study and practice.

Exploring the Impact of App-Based Instruction, Group Exercise Class on the Future Role of Group Fitness Instructors and Personal Trainers

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This study aims to provide insight into how group fitness instructors and personal trainers can integrate AI and app-based exercise programmes into exercise instruction. As AI is becoming increasingly more efficient and personalised, the role of group fitness instructors and personal trainers is inevitably set to change. This impacts how we teach and certify fitness professionals. Information from end-users can provide valuable insights into the behaviours and acceptance of AI programmes that run in-place of or alongside traditional fitness programmes. This study uses a survey to gather data on the impacts of an app-based (DownDog) group exercise class (yoga) on the participants expectations, motivation, and commitment. Follow-up interviews provide the participants perceived benefits/harms of the class. Preliminary results and findings suggest that app-based instruction meets or exceeds expectations in regard to the design and app-functionality – which creates motivation and commitment to continue the exercise programme. Participants indicated that the AI-generated programmes provide sufficient prompts and feedback for executing movements. Perceived benefits are related to themes around lack of judgement from instructors, consistent and flexible class schedules, and the ability to complete additional classes at home. Perceived negative attributes of AI-based exercise courses consist of themes associated to lack of modifications or correction when needed, lower social interactions, decreased motivation due to a lack of accountability. This project may have implications for how group fitness instructors and personal trainers can work alongside AI and exercise-based apps to continue delivering exercise instruction in a fast-paced and changing industry.

What's Next? Learnings and Reflections from the Design Industry Panel Speaker Series

Machiko Niimi (Otago Polytechnic); Tim Armstrong (Otago Polytechnic); Angus Lewry (Otago Polytechnic); Alex Gilks (Otago Polytechnic); Matt Sutton (Otago Polytechnic); Andrew Wallace (Otago Polytechnic)

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In this presentation, we will share one thread of learnings and reflections from the panel speaker series held during the Otago Polytechnic Product Design “Make Do” Symposium in October 2024. This symposium featured four panels: Graduate Panel, Design for People and Planet, Design for the Outdoor Equipment, and Design Entrepreneurs. The speakers shared insights into what is currently happening in the product design industry and the discipline. A broad audience comprised of students, educators, and designers with a range of experiences, from graduates to senior design management and seasoned design entrepreneurs. For this presentation, we captured a thread of conversations and recurring themes that may be helpful for educators of various disciplines beyond design. These were the importance of attitudes and behaviours: a) to be confident and humble, b) to have a “can do” attitude. These seemingly simple concepts have prompted our team to rethink our teaching practice. We will expand on what these concepts meant in this context and the benefits to professionals. Are our students still can-do? We examine what practical skills, experience, and other elements might be useful to help students graduate with more of these attitudes. After all, the aspects of can do are connected to the feeling of confidence, allowing them to be humble and valuable in a team working environment. One of the audience’s favourite quotes from a graduate at this symposium was that she wanted to know as a student “that everything would be okay.” Perhaps, with an instilled value in confident, humble, and can-do attitudes, things will probably be OK as our precious graduates navigate the rapidly changing world.

Voting Rights in Equity Crowdfunding

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This paper presents research on New Zealand companies using equity crowdfunding (ECF) where new shareholders are offered differential voting rights. Some ECF companies sell non-voting shares, others sell an indirect shareholding through a nominee company, while others provide direct ownership with full voting rights. ECF companies justify this by stating that selling non-voting shares or using a nominee structure allows them to avoid becoming subject to the Takeovers Code and avoiding the associated Code compliance costs. These practices persist despite multiple changes to the Takeovers Code to reduce compliance costs for small companies. This paper examines the choice between direct voting shares, non-voting shares and using a nominee structure, and the implications of that choice for companies and shareholders. Withholding voting rights undermines shareholders' ability to protect their interests but can help management ensure the company remains focussed on its mission. Using a nominee structure can have the opposite effect by converting minority shareholdings into a unified voting bloc. Data on rights and financial characteristics is collected from public disclosures made during the ECF capital raise and in Companies Office filings. The first part of the analysis is to identify prior differences between the three types of company. The second part is to determine whether different voting rights impacts the crowdfunding campaign's success. The third part is to examine the long-term impact of these differences on ECF company success or failure.

The Transformative Potential of Refugee-with-Refugee (RwR) Value Co-Creation During Resettlement

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This study explores service-related issues of newly arrived refugees in a host country, the role of fellow established refugees, and value co-creation efforts during refugee-with-refugee (RwR) interactions. The ongoing global refugee crisis, marked by the highest-ever recorded displacement figures, underscores the urgent need for effective solutions like resettlement. Despite being a key strategy, resettlement is offered to less than one percent of refugees annually, leaving many without long-term solutions. Host countries, especially those near conflict zones, often lack the resources to provide adequate support, leading to challenges in integrating refugees. This research explores how co-creation, particularly through peer support among refugees, can enhance resettlement outcomes. By leveraging the experiences and resources of established refugees, new arrivals can better navigate challenges, thereby improving their chances of successful integration and overall wellbeing, as highlighted by Transformative Service Research (TSR). This investigation employs data triangulation via a qualitative method by conducting semi-structured interviews with a purposive sample of 11 newly arrived refugees, 12 established refugees, and 11 staff members from resettlement agencies in Aotearoa New Zealand. The study identifies three major themes: service provider-related challenges, challenges faced by newly arrived refugees when accessing and utilising services, and the motivations, abilities and opportunities of established refugees in assisting newly arrived refugees. The study proposes an RwR value co-creation framework which highlights the importance of established refugees in facilitating newly arrived refugees' service inclusion across all stages of a service encounter. The RwR value co-creation framework is the first of its kind from a refugee resettlement perspective taking a TSR perspective. This framework offers practitioners a structured approach to understanding value co-creation between established and newly arrived refugees. Drawing on C2C value co-creation approaches to develop the novel RwR value co-creation framework, the study contributes to TSR literature by addressing issues of refugee service inclusion.

Evaluation of a Marae-Based Pulmonary Rehabilitation Programme: A Decolonising Approach to Research with Māori

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Māori are disproportionately disadvantaged with regards to the rates and consequences of chronic obstructive pulmonary disease (COPD). In addition, Māori are less likely to attend standard pulmonary rehabilitation programmes. Consequently, the Better Breathing programme delivered by Waitaha Canterbury Community Respiratory Services was adapted and delivered in a marae setting and researchers at Ara and Sport New Zealand (Māori kaiārahi) conducted an evaluation of the marae-based programme aiming to inform future programmes to meet community needs. Participants included the kaimahi who delivered the respiratory programme (n = 5) and all kaumātua Māori at the marae were invited to contribute to the kōrero (n = 16). Ethical approval was obtained from the Ara - Te Pūkenga subcommittee. The qualitative research methodology was designed to incorporate decolonisation principles and honour Te Tiriti o Waitangi. The research team visited the marae on three occasions to allow time to engage in whakawhanaungatanga and to discuss the most culturally appropriate way for kaumātua to share their whakaaro. Data collection methods that emphasised a collective process were used to evaluate the respiratory programme, a kōrero held with the kaumātua and a focus group with the kaimahi. Both data sets were thematically analysed followed by a comparison of the two sets of themes to develop a congruent narrative of the experiences of the kaimahi and kaumātua. The evaluation identified five themes fundamental to the success of the rehabilitation programme. Findings indicated the importance of considering marae kawa, whakawhanaungatanga and taking a holistic approach. Having fun and the need to be flexible and responsive were key to remaining client-centred. This presentation focuses on decolonisation strategies used in this research to uphold commitment to Te Tiriti o Waitangi and engage effectively with kaumātua Māori. Challenges and implications from the results will be explored to inform future researchers.

Can AI Assist us to Address Cognitive Load for Neurodivergent Online Learners? Starting our Journey

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We are collaborating to develop an innovation in the presentation of online course pages. Our scholarship and experience indicate that higher cognitive load can be a barrier to learning, especially for neurodivergent learners. Spending mental effort to understand information is part of learning, but strenuous exertion, if unnecessary, is wasteful, fatiguing and off-putting. Although there is a paucity of literature on neurodivergent learners and cognitive load in online learning environments, emerging evidence suggests these environments pose challenges. Our innovation involves testing the use of AI to produce summaries of online course pages. Our hypothesis is that we can reduce cognitive load in online learning by giving learners a choice to see a summary of any page of course content. Our aim is to support neurodivergent (and other) learners engaged in online education. Our research project is to collaboratively design and trial the innovation. Our project has three phases: 1) establish our collaboration and conduct a literature review; 2) explore and trial the use of AI tools for producing the course page summaries, and 3) trial the summaries with neurodivergent (and other) tertiary learners who are learning primarily online. This paper reports on the first two stages of our research as a work-in-progress. We present our key findings from the literature review on the intersection of neurodivergence, cognitive load and AI in education. We report our findings on how well our chosen AI tools were able to create our desired course page summaries, and note limitations and implications of our research.

Challenges and Opportunities Faced by HR Professionals in Aotearoa, New Zealand and Strategies for Their Effective Management

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The aim of this study is to identify contemporary challenges and opportunities HR professionals are currently facing and are likely to face in the long term (three to five years) in Aotearoa New Zealand. The research will also explore strategies implemented by HR professionals to effectively manage the identified challenges and opportunities.

A focus group with 7-9 senior HR professionals from different New Zealand industries and regions will be conducted. The data will be analysed using thematic analysis. The existing literature has identified several challenges and opportunities including increase in reskilling and upskilling initiatives through use of automation and artificial intelligence, enhanced diversity, equity and inclusion practices, data-driven decision making, increase in remote and hybrid work, extensive focus on employee well-being and mental health (HR Connect, 2024; Frontier, 2024; HRNZ, 2020), adapting to rapidly changing technological advances, compliance and regulations, talent acquisition and retention, and managing remote work and hybrid models (Frontier, 2024; HRNZ, 2020). This research will provide valuable and current insights to both HR practitioners and students by highlighting the challenges and opportunities they are likely to encounter in their workplaces. It will also inform current effective strategies HR practitioners are implementing to address the identified challenges, helping prepare future practitioners to navigate and adapt to the issues.

Product Design for Health - Stoma Shield

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This presentation discusses a novel design contribution made by product design at Otago Polytechnic in collaboration with Department of Surgical Sciences, University of Otago (UO). This project aims to significantly improve the quality of life for stoma patients by shielding stoma bags and reducing the incidence of post-operation hernias. This project leverages clinical knowledge from UO, which, while rich in theoretical expertise, was unable to translate their insights into physical, practical, refined solutions. This project used 3D-printing processes to develop iterative prototypes as a communication tool to meet the needs and test the effectiveness of the concept. The 3D prototype models, often in raw stages, were the centre of our conversations during our weekly meetings to inform and test ideas. This approach significantly sped up the iteration process, allowing several design ideas to be validated through physical assessment. This process led to generations of multiple devices for a pilot study to allow the initial concept to be validated for continued design iteration, ensuring that all ideas were considered through a collaborative effort where medical and design practitioners co-created the solution fluidly. The initial trial of the stoma-shield device showed potential to enhance the stability and comfort of stoma bags but lacked the critical customisation and adjustment that is necessary with this device, which informed the refinement of the following design outcomes across the development cycles. The presentation will detail the iterative design process, from initial concept through prototyping to pilot studies. Emphasis will be placed on the collaborative nature of the project, highlighting how the open-ended collaboration allowed for a dynamic and flexible development process. This project underscores the critical role of product design within medical design research. Bridging the gap between clinical theory and practical application led to important contributions to management of the patient's stoma and longer term health outcomes.

Kari i te Tuara: 3D Game Work in Progress

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This project explores the development of a 3D video game centred on restoring native plants and ecosystems in Murihiku (Southland), allowing players to engage in ecological rejuvenation efforts with tangible impacts on waterways, wetlands, and native bird populations. A key feature is the game loop, which rewards players with bird companions for ecological actions, enhancing immersion and reinforcing environmental themes. Progress is marked through an evolving soundscape populated by bird songs, adding an auditory layer to the gameplay experience. Technical challenges include optimizing complex assets, such as managing large data sets for feathers in bird animations, and balancing stylized, low-polygon solutions with procedural techniques in Houdini. Another focus is the integration of environmental data to accurately recreate Murihiku landscapes within Unity and Unreal game engines, alongside experiments leveraging LiDAR (Light Detection and Ranging) data for authenticity. This presentation will share insights and challenges from the early stages of developing an immersive, ecologically rich gaming experience.

The Student Nurse's Experience of Telehealth as a Clinical Placement in the BN Programme

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Whakarongorau, The National Telehealth Service, became a designated clinical placement for the Bachelor of Nursing (BN) students in The Family, Whānau and Community placement paper, BNF700, from the beginning of 2022 to mid-2023. The positioning of students into this placement not only focused on contemporary and innovative health practice but presented an opportunity to be part of the impetus to address health inequities in Aotearoa. Telehealth, as a clinical placement is a new experience for the students, in relation to the fact that they are not face to face with their patients or clientele, as they are in all other clinical placements. There have been few research studies noted that have explored the student perspective of telehealth as a clinical placement. Research studies have focused on looking at educating nurses on the use of technology/informatics and education requirements needed to move into the digital arena. International based research studies have found that the experience of telehealth in nursing education, at different levels, remains minimal and needs further research to evaluate future practice needs. The clinical placement with Telehealth presented an ideal opportunity to explore the students experience of telehealth as a clinical placement/learning environment and for the researchers to identify the suitability of this placement for the students. The research team used a qualitative/descriptive approach. Data was collected from three focus group sessions using the zoom platform. To remove bias, the focus group sessions were taken by two lecturers, not involved in the course or the development of the research project. The research team are at the stage of thematic analysis with the aim of completing subsequent stages and presenting the findings at conference.

Engineering Ākonga (Student) Perceptions IEA Graduate Attributes

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When studying vocational engineering in New Zealand, ākonga (students) must meet 12 graduate attributes as part of the programme's accreditation under the International Engineering Alliance (IEA). The researchers wanted to know which attributes ākonga consider highly valuable and which they consider less valuable. This preliminary study aims to assess ākonga perception of the importance of various graduate attributes in the context of what will be the most useful when transitioning into the workplace. By exploring ākonga perceptions of the IEA graduate attributes, the research seeks to identify potential gaps between educational outcomes and industry requirements, thereby enhancing the relevance and quality of engineering education programs. A short survey was sent to ākonga in their first year of study of a mechanical, electrical or civil vocational engineering qualification (NZDE or BEng Tech). Participants were asked to select the most/least valuable and most/least exciting IEA graduate attributes and justify their selections. The responses were thematically analysed and compared to the existing literature. The data collected is primarily qualitative. Results from the survey's thematic analysis and literature review confirm the researcher's observations. Most first-year ākonga consider the IEA graduate attributes with explicit technical content most important, while the attributes with a higher proportion of professional/social skills are considered less important. It is recommended that a workshop is developed for ākonga on the IEA graduate attributes and the importance of each in an engineering context. It is also recommended that discussion about the IEA graduate attributes be better integrated into courses. As the preliminary study has been completed, the researchers intend to extend the work to a longitudinal study to see if changes to the teaching of the IEA graduate attributes change ākonga impressions of them.

Navigating the Fog: Studying while Concussed

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Tertiary students rely on their brains to learn, understand and think critically, as well as to interact and function socially. Many unanticipated factors can interfere with those responsibilities, and all-causes concussions can be one of those obstacles. Dealing with the 'invisible' injury that is concussion, with its uncertain trajectory of recovery, can mean undue pressure on study experiences. The aim of this project was to explore the experiences of students living through concussions to better understand their personal and institutional challenges. Individuals who had experienced concussion while students were invited to complete an online survey. Exclusion criteria were those not formally studying or who had not experienced concussion. A descriptive analysis of completed surveys was conducted in the preliminary phase. 49 survey responses were received (10 who did not meet the inclusion criteria were removed). The remaining 39 respondents (64% and 36% female and male respectively) mean age was 24.5 ± 10.3 years (range 17 - 54). All but 5 respondents experienced a diagnosed concussion (71 concussions reported across 34 respondents) and 56 cases undiagnosed. Sport and recreation were associated with 58% of the reported concussions, 15.6% from falls, 8% associated with alcohol, and 4.7% from assault. The most common symptoms were headache, light sensitivity, dizziness and fatigue/low energy. Persistent symptoms were headache, difficulty concentrating and fatigue. Respondents reported that concussion negatively affected their studies (83%) and shared various sources of help, and their frustrations during their recovery and/or studies. The unpredictable and inconsistent trajectories of concussion recovery frustrated the studies and experience of most respondents. Without clear institutional policies in place, respondents in this study felt they were well treated but remained vulnerable to various factors that could impact their wellbeing and academic performance. Their experiences offer pathways for the institution to improve learning and wellness support of concussed students.

AI-Safe: An Assessment Design Tool for the Safe Use and Against the Misuse of Generative Artificial Intelligence

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The aim of this project is to develop and promote a conceptual tool for teachers, educators, curriculum developers and designers to facilitate the design of AI-safe non-exam assessments in (tertiary) vocational and professional education. While AI can be used appropriately and legitimately by students / ākonga, it may also be misused (preventing full and fair assessment of learning). In addition to the use of AI detection software and academic integrity policies and procedures, there is a need to ensure assessment validity and reliability through effective, human-centred task design. This project is focused on answering the following questions: What is the most user-friendly, efficient and widely applicable conceptual design tool to enable legitimate AI use and prevent misuse in assessments? What improvements and insights can be gained from trialling this instrument using Research by Design? What new knowledge on assessment can be generated from this approach? The intended outcomes of the project are initially the development of a conceptual framework (building on a 2023 OPSITARA research project), a prototype of the conceptual design tool, and a public WordPress website with supporting material. Subsequent analysis of qualitative data collected through Qualtrics from successive anonymous trials of our design tool, including user feedback synthesis will support further development of our conceptual framework / design. Finally, reflection on the design process and interconnection of the concepts in our framework will culminate in academic journal articles for the website. Our AI-Safe Assessment Design website will unpack the conceptual framework, provide ideas for applying the concepts; and examine conceptual overlap with principles and propositions from national education bodies.

Embedding Ethics in the Workplace - Aotearoa Construction Trades

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This study, ongoing since 2023, explores strategies of ethical practice and their benefits within the electrical industry, focusing on a New Zealand context and considering best practices established overseas. In 2024, research interviews will be undertaken by the researcher in an attempt to understand the importance of embedding robust codes of ethics that guide practitioners within the electrical industry, primarily at a tradesperson level. In the wake of an economic downturn, which is effecting the construction industry, strong ethical practice within the industry is needed now more than ever to ensure the best outcomes for society and the environment. This research addresses the demand for strong ethical practice at a trades level that will enhance the performance and reputation of the electrical industry and improve the sustainability of New Zealand electrical businesses. The researcher has employed a qualitative methodology, involving online surveys and semi-structured interviews with members of the electrical industry within Aotearoa, New Zealand. Early findings of the study suggest that embedding robust ethical guidelines at a trades level can lead to improved relationships between businesses and stakeholders, as well as improved outcomes, such as quality and health & safety. This research offers valuable insights for business owners, industry regulatory boards, tradespersons and educators involved in the electrical industry and vocational training. By highlighting successful ethical practices, the researcher hopes to provide practical recommendations for enhancing electrical trades programmes and provide guidelines on ethical practice for electrical businesses and practitioners. For Otago Polytechnic, these insights will potentially guide the development of more ethical, inclusive and sustainable electrical programmes at a trades level.

Unveiling Ōtautahi's Ethnic Food Preferences

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This study aimed to investigate the factors influencing the consumption of culturally diverse cuisines and their impact on customer satisfaction and loyalty among Christchurch residents. A modified Food Choice Questionnaire (FCQ) (Steptoe et al., 1995) was administered to 217 participants via Qualtrics-enabled iPads. Results indicated that six factors significantly influenced the consumption of culturally diverse foods: mood, sensory aspects, culture, value, convenience, and health aspects of the food. Perceived mood, sensory appeal, and perceived value were found to be the most significant predictors of customer satisfaction. These findings suggest that marketing strategies for ethnic foods should emphasize their mood-enhancing properties, sensory appeal, and perceived value to drive sales of ethnic food in Christchurch.

Looking at Teaching Practise to Develop a New High Interest Course

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Polytechnics and Universities across New Zealand offer a wide range of engineering courses at a degree level, whereas there are no such courses that offer specific focus on motorsports, combining engineering principles, such as analytical, practical, and computational all together. Therefore, the purpose of the work was to look critically at our Engineering System Analysis (MG7028) course, by obtaining the information available in public domain (e.g. feedback) and facilitate a future resilient course. The goal was to create a course that fosters strong student engagement and enhances the marketing of the Ara Engineering brand. In 2016, we began designing a course with a motorsport flavour that integrates the skills and knowledge students have acquired to date. This course leverages Ara equipment and facilities, plus Canterbury-based industries, to provide practical hands-on experience in an engineering field. This has developed into a 2.5-week block course, with an external project component and extensive industry visitation, collaboration, and employment opportunities for students. Reflecting on successfully running the course for the past eight years we can see the growth of significant industry support, international interest, graduate employment links with Industry partners, research collaborations, and curriculum development. This presentation suggests value in developing high interest curriculum to engage students and industry.

Technology and Craftsmanship

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Architectural models have long been used as a means of expressing architectural concepts and well-crafted models often reflect the creativity of the design but also the sensibility and expression of an architectural practice. Technology influences our creative expression and as we move from one technology perspective to another the craft skills from the previous can become lost as new technologies become commonplace with the transition often having us lamenting the loss of skills of the past. CNC has become commonplace with software manipulation the interface from concept to the physical output but, does this necessitate the loss of craft skills? This presentation reflects on the use of CNC laser cutting as a tool for teaching construction systems and architectural communication providing opportunities for new understanding or development of physical making integrated with CNC and adding value. Our architectural communication and construction courses have gone through different developmental phases beginning with the use of physical laser cut parts to model the construction process akin to how the assembly of a model aeroplane provides an understanding of an aircraft's structure and its systems. The Covid pandemic isolation forced a reconsideration of the physical model to a purely digital format which then led to 3D digital modelling as a way of testing physical modelling prior to laser cutting. This process proved to be complimentary with digital modelling providing proof of concept and an experimentation phase prior to physical construction. Finally, the evolution from a process focussed on laser generated outputs to a process that uses the laser as a tool to facilitate design concepts that includes elements of craftsmanship and personal expression. This phase required students to accept the laser technology as simply a tool and physical human input was required to elevate the model to a personalised expression.

Failing to feedback – in the first instance: The development of an escalation pathway for aged care mentors for Bachelor of Nursing students

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Failing to provide critical feedback is an all too familiar concept within the realm of academia. In undergraduate nursing training, reliance on constructive and timely feedback in various clinical placements across their curriculum helps form the student's clinical progression. Aged Residential Care (ARC) placements for nursing students are in high demand and large cohorts of students creates added pressures for ARC, students and educators. Current literature suggests limited research in this area in the ARC setting. The purpose of this study is to explore what is currently occurring in the ARC setting in regard to clinical support, collaboration and escalation. A mixed methods analysis of Year 2 BN students' clinical placement progression notes during their ARC placement over one calendar year was conducted. Quantitative data was gathered through analysis of each student's ARC progress notes concerning the qualification of the health professionals completing the documentation on each student. Additionally, the progress notes as qualitative data themselves were analysed thematically. Three themes were identified: escalation, support and communication. This formed the basis into the development of the escalation pathway. The results suggest that early identification and increased support and guidance by ARC mentors are needed. This can help identify mentors who need additional support and guidance from the education provider. The development and future implementation of a streamlined escalation pathway for all ARC mentors supporting BN students will aid in giving more timely feedback to BN students. These findings have implications for future practice in the aged care sector by creating a stronger and collaborative partnership with the utilisation of this pathway between ARC setting and the tertiary education provider.

Genre Prompts as Reflective Tools in Professional Practice

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In Professional Practice research, autoethnography is a key tool. Insider researchers use experiences from their real lives to engage in an exploration of deeper meaning and insights toward making a positive difference in their practice and that of others. Compelling narratives motivate, illustrate, and inform change-based research agendas. The interplay of multiple voices allows for authentic storytelling and complex narratives interwoven with exegetical discourse. But for many, the expectation of compelling narratives with multiple voices can be challenging. This presentation seeks to explore the use of genre prompts in developing authentic voices and compelling narratives in professional practice learning. Taking an autoethnographic approach, we describe our use of 130 genre-prompts as reflective practice within our professional practice research. These genre-prompts take their form from story inspirations: “It was a dark and stormy night... what comes next...?”. The genre-prompts focus on the genre: explain your story to a five- year- old; write as if it were a classical ethical dilemma (or a new one such as the Trolley problem) ... and so on. The two ākonga in the authors’ (DG, KW) contributions come from their Doctor of Professional Practice, while the kaimahi (SM, RM) contributions come from a “summer writing club” with DG. The genre prompts were successful in overcoming the tyranny of the blank page. For all four authors, they provided an entertaining way of engaging with the process. The genres were a playful way to explore different ways to communicate, with differing voices and framing of events leading to unexpected outcomes and insights. We believe that the creative constraints led to reflection that was more generative than it might have been otherwise. While this prompted storytelling was developed for a specific purpose (see Fictomorphosis paper at this conference) we found it useful in many areas of reflection within the Professional Practice journey- from the initial review of Learning to writing the final discussion. This presentation will be useful for kaimahi and ākonga in any field or level looking for ways to engage in reflection.

Evaluative Questions for Necessarily Insider Professional Practice

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In Professional Practice research and learning, it has long been understood that much learning comes from challenging situations in the work environment. But much benefit comes from unexpected areas in this lived experience such as racism in employment or the emotional aspects of living through a disaster. These areas could be researched through carefully targeted study design, but such structured approaches can belie the necessarily fluid nature of Professional Practice in the real world. We introduce a Necessarily-Insider Research Framework (NIRF) to guide Professional Practice research. The new framework is informed by Costley's approach to professional practice, Tracy's Big Tent, and Patton's Developmental Evaluation. We use evaluation questions from this approach to explore three Professional Practice practitioner theses. This approach recognises the messiness and complexity of practice in a way that is authentic, emergent, and responsive. Rather than attempt a one-size-fits-all method, we take an evaluative question approach to provide guidance for different situations. In three Professional Practice theses, the questions enabled researchers to learn from unexpected challenges that might have otherwise undone the research. For one thesis the NIRF enabled shaping and articulating a new method. In another, the NIRF supported a reshaping after significant disruption. In a third, the framework guided reflection on a novel approach to integrating critical reflection into the thesis. A fictional critical muse used throughout the thesis to aid in storytelling was able to use the NIRF evaluative questions as the vehicle for the final chapter. The very things we should be focussed on for learning, practice, and research are effectively invisible in much of Professional Practice research. We expect this Necessarily-Insider Research Framework of evaluative questions to offer opportunities for new learning and research in areas hitherto difficult to access.

Layered Drivers Framework

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In developing Professional Practice research for real-world impact, we need to design for system transformation of social and organisational systems. This requires an approach to levers for change at all levels in a system. In designing research, rather than taking a single point of intervention, we look for multiple places to act upon complex systems. To do this, we need an approach for considering the multiple layers of drivers and forces within social and organisational systems. We take a systems thinking approach, combined with resistance scholarship and critical theory. In this presentation, we describe the development and use of a “Layered Drivers” model within Professional Practice research. We take Boehnert’s layered model of levels of sexism and extend it to a generic structured framework of drivers of oppression. These levels are then expanded with recognisable statements that might be found in organisational contexts, and suggestions as to ways to overcome these barriers. We apply the Layered Drivers framework to three Professional Practice research projects. In a project on emancipatory leadership, the Layered Drivers provided a framework for helping to articulate oppressive behaviours and structures in organisations. In a study of professional identity in technical leadership, the Layered Drivers deepened understanding by acting as another dimension in a professional identity framework. For a study of decolonising computing, the Layered Drivers laid the foundation for narratives of change. We expect this approach to provide insights for applied research, particularly Professional Practice research in providing a framework for both identifying and overcoming barriers to system transformation of social and organisational systems. Further research will focus on the use of the Layered Drivers framework at earlier stages of professional practice research - in particular in the reflection on experience in establishing researchers’ positionality.

Like and Subscribe and Learn: Podcasts in Learning

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There is growing interest in alternative forms of theses beyond traditional written monologues. We previously developed a framework for non-conventional practitioner theses, calling them *negotiated* rather than *alternative* to avoid assuming the dominance of written formats. However, little research captures ākonga (student) experiences with these formats, particularly for interim stages of Professional Practice research. This presentation explores the use of audio and video podcasts in Professional Practice research. We take an autoethnographic approach, reflecting on our experiences as four ākonga who created podcasts. Our main finding is that podcasts require significant effort. We all asked, “Why didn’t I just write it?” but found compelling reasons to persist: (i) Contextual fidelity: Podcasts allowed us to keep research closer to the subject matter. For some, this format enabled unique juxtapositions or subtle hints unachievable in writing; and (ii) Immediacy: Podcasts captured moments of dramatic change that writing would have missed. However, podcasts also raise challenges: (i) Managing multiple formats: How should formats like videos and board games be navigated? While bricolage offers a holistic approach, assessors must still engage with them sequentially; (ii) Owning the criticality: How to ensure that the ākonga’s critical voice is heard, even if it comes from someone else’s mouth? (iii) Explaining format choices: Should learners justify their use of non-conventional formats within the “thesis”, or would this diminish their communication? (iv) Institutional acceptance: How can podcasts be recognized as primary outputs, rather than requiring supplementary written summaries? We all struggled with expectations of providing written summary or exegesis material which undermined the premise of the primacy of the work. This presentation will interest ākonga and kaimahi navigating self-determined learning. It also raises questions for institutional debate, including how assessors approach negotiated formats. Future research will explore the perspectives of assessors engaging with non-traditional outputs.

Raging with the Machine: Collaborating with AI in Learning

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The rapid development and deployment of AI-powered language models presents one of the most critical challenges for both industry practitioners and educators. In education, the choice is clear: we must either adopt these technologies as collaborators in learning or risk becoming obsolete. However, there is little guidance on the implications of treating AI as a collaborative partner. This presentation explores insights gained from applying a collaborative project-based learning model with AI. We conducted an experiment in which a team of three participants worked alongside ChatGPT, treating it as a creative collaborator to address a transdisciplinary management problem. The team received scenario details several days before the simulation and had 1 hour and 45 minutes to complete interconnected tasks. Following the simulation, a quick oral debrief was held, and participants later submitted formal written reflections. In under two hours, the team achieved work equivalent to a passing grade for a semester-long project. Several key themes emerged. Technology can dominate learning, and the necessity of prompt engineering when using generative AI was highlighted. Effective collaboration depended heavily on the quality of prompts provided to ChatGPT. Additionally, AI exaggerated differences in team members' working styles, and participants had to adapt to "thinking at the speed of ChatGPT." While AI accelerated content production, it raised concerns about whether this pace allowed adequate time for human reflection and debate. This experiment also prompts reconsideration of whether traditional semester-long projects remain effective or if students would benefit more from completing multiple shorter, AI-supported projects to prepare for the workforce. Although the experiment raises more questions than it resolves, it raises the importance of viewing AI as a collaborator rather than a mere tool. This shift in mindset could transform both learning and the role of educators in preparing students for an AI-driven future.

The Use of Jigsaws in Tertiary Education

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Our aim is to explore the use of jigsaws in tertiary education for teamwork in healthcare environments by connecting this with experiential learning. We have used jigsaws in multiple healthcare teaching settings, including interprofessional education, health promotion, and mass casualty simulations to teach teamwork. Initially after each use of jigsaws, we reflected on the experiences. Our reflections prompted further enquiry into the relationship between the use of jigsaws and learning theory. We propose that the practice of using jigsaws puzzles is linked to the learning theory, Experiential Learning. Experiential learning is the process of learning by doing and can be used to support students to undertake learning in a variety of contexts. Our use of jigsaws in healthcare education is learning to work in groups to simulate complex health environments. During the jigsaw activity participants have specific tasks to perform and responsibility to relay acquired information to others. This occurs with a concrete experience (a jigsaw), reflective observation, abstract conceptualisation, and active experimentation. We are using a case study approach for our exploration. This includes an in-depth study of our reflections of our experiences of using jigsaws in our healthcare teaching practice, and literature regarding using jigsaws in higher education. We are exploring and describing these in depth in relation to experiential learning. The concept of jigsaw puzzles has been used in teaching management, computer programming, medicine for team building, simulation, and pieces in group learning activities. However, we have not found any literature thus far that supports the use of jigsaw puzzles within health professional students in relation to teamwork in healthcare environments. The significance of this research is situating the use of jigsaws as a teaching method with experiential learning to enable further sharing of this teaching method.

Planting and Nurturing Transformation: A Living Campus 15-Year Retrospective

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The refrain of “Think global, act local” carries with it tensions: of making change that is intended for long-lasting impact while delivering immediate benefits; of changing how we teach to that; of process and criticality while still covering content; of big pictures of societal change while not losing sight of the environment under our feet; of moving to post-disciplinary concepts such as sustainability, while still teaching to existing graduate profiles; and of living what we preach. How do we manage these tensions within vocational education? This presentation is a 15-year retrospective of Otago Polytechnic’s “Living Campus”. It contains reflections from those Kaimahi who have variously led and contributed to the project over its journey. In 2009, Otago Polytechnic first mooted a “Living Campus” that aimed to provide a vehicle for the institution’s then mission of “every graduate may think and act as a sustainable practitioner”. Described as “celebrating a sustainable model of urban agriculture for the ownership and benefit of the Dunedin community” the Living Campus was to be a “productive community garden, vibrant campus, and interactive museum”. With the first plantings in March 2009, the Living Campus has continued under the guardianship of the School of Natural Resources, with the support and involvement of many other schools. The Living Campus continues to thrive through expanding its composting system (continuing an initial goal of “moving sustainability to front of house”) overcoming dislocation from a new building; and a recent establishment of Te Hoki an area of endemic podocarps which represents a collaborative venture representing mana whenua, sustainability rōpū and the Office of the Kaitohutohu. An adage springs to mind regarding the significance of this project: “When is the best time to plant a tree? 15 years ago. When is the second best time? Today.” We hope this exploration of the journey of the Living Campus will lead to the establishment and investment in other long-running projects within education that go beyond the immediate return.

Dancing in the Eye of the Tiger: Fictomorphosis in Professional Practice

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This presentation offers a novel methodological contribution for addressing taboo topics in Professional Practice research. Insider researchers using ethnography and autoethnography draw on personal experiences to explore deeper meanings and generate insights that drive positive change. While compelling narratives are essential for motivating change-based research, certain events and contexts are off-limits due to non-disclosure agreements, privacy, safety, or ethical constraints. This creates significant challenges, especially for emancipatory research, where issues like misogyny, racism, and other forms of oppression remain hidden and unexplored as “taboo” topics. There is a critical gap in methods for effectively engaging with such restricted subjects. This presentation introduces “Fictomorphosis,” a new method for addressing these challenges. Traditional approaches to taboo ethnography rely on anonymising participants, settings, and events, raising concerns about the extent of fabrication involved. In contrast, fictomorphosis embraces creative storytelling by reducing narratives to a single question or statement and retelling them in entirely new genres and contexts. These fictionalised stories then become the foundation for analysis and practice-based change. Our benchmark is that original participants in the research environment would see the stories as perceptive, without any recognition of the origin in their own experience. We detail a series of experiments conducted to test and refine this approach, demonstrating how fictomorphosis can address both practical and ethical challenges. In particular, we illustrate its application within a professional practice setting involving intellectually disabled adults, who are often excluded from research due to consent-related concerns. This new method offers Professional Practice researchers a way to engage with stories that simultaneously must be told and cannot be told. Fictomorphosis provides a viable framework for exploring sensitive topics while protecting individuals and contexts, opening new possibilities for meaningful research in constrained environments.

Micro-Credentials for Prefabricated Construction

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This study reviews micro-credentials for prefabricated construction available in OECD countries. Prefabricated construction is an innovative approach to achieving rapid delivery, cost reduction, premium quality, lessening accidents, and enhancing sustainability. However, one of the challenges to stakeholders involved in prefabricated construction is the lack of skilled and experienced people. There is no formal qualification opportunity for the workforce interested in opting for prefabrication construction professions. Micro-credentials have the potential to gain advanced knowledge and have benefits not limited to personalization, competency, flexibility, cost efficiency, and collaboration. However, there are few NZQA-approved micro-credentials for construction and none for prefabricated construction. This study compiles information from web sources about current micro-credentials provided by educational institutes and industry practice bodies. The content was reviewed for the inclusion of topics, level, credit hours, contact hours, mode of delivery, design elements (self-directed, job-integrated, competency-based, and research-based), assessment and evaluation, recognition, funding, pricing, and offering. It was found that there are limited micro-credentials available for prefabricated construction. The technological variation (based on cold-formed steel, timber or precast) is one of the key reasons. However, there are several trade-level micro-credential qualifications available but the coverage of topics is brief, the range of levels is 3–4, credit hours are 1–9, contact hours vary from 3–40, the mode of delivery is mostly flexible, the design mainly addresses self-directed learning and competency-based learning, 50% passing, certification access, no funding to pursue micro-credentials, and price variation. This study revealed opportunities available regarding micro-credentials for prefabricated construction. This study is helpful for educators involved in the development of micro-credentials for the industry. Institutes are potentially assessing the viability of introducing micro-credentials as alternate qualification pathways. Industry professional bodies as well as companies can evaluate the need to embed the micro-credentials as continuing professional development and in-house training.

Modern Works for Jazz and Contemporary Brass

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“Modern Works for Jazz and Contemporary Brass” is a collection of modern works for five musicians plus featured soloist. This project will be presented as a studio album and welcomes New York based jazz trumpet legend Ingrid Jensen as the featured soloist. <https://ingridjensen.com/>. These works will also be presented in 'book form' as a collection of scores and individual parts. This project began by looking at how I might compose new works for a brass ensemble and soloist, drawing on inspiration from three artists who have greatly impacted me at various times in my musical life – esteemed American composer Aaron Copland, Canadian composer and trumpeter Kenny Wheeler and American jazz trumpeter Ron Miles. Both the album and book have already been accepted for publishing by Rattle Records - a well established and highly regarded promoter of contemporary art music.

Not Without Consequence. Tangata Whenua Tiriti Educators in Tertiary Learning Spaces

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Tiriti o Waitangi education is not without consequence. The ākonga | learner experience is layered, with (at least) ethnicity, gender and age contributing to the positionality of understanding the content. Facilitation of Te Tiriti o Waitangi workshops over two-days has been a common tertiary and external experience. In an Otago Polytechnic degree programme, this has been layered across several weeks focusing on how the programme facilitates content as explicit, integrated and applied. The focus of this Masters of Professional Practice thesis comes from an educator's experience of teaching the content as the sole facilitator in the room. It also arose from observing and participating in education with two facilitators in the room. A Kaupapa Māori approach underpins the research, which focuses on good practice for Tiriti facilitators in tertiary learning spaces. Whakawhiti kōrero | sparkling discussions align with a semi-structured style of participatory interviews. Kanohi ki te kanohi | face to face interviews and online interviews were held, with a small group of experienced tertiary educators within Aotearoa New Zealand. Arts-based research intertwines a response to both method and methodology approaches and pūrākau weaves with autoethnography and poetic inquiry as both analysis and response. For the participants and the researcher, praxis and practices weave together words and wairua, with an invitation to the reader to engage in an Indigenous analysis process that evolves in reaction to writing the findings. The findings are a result of the series of interviews focusing on gender and ethnicity, which emphasise that for many tangata whenua Tiriti educators, facilitation of Tiriti o Waitangi content with two facilitators in the room, is good practice, and is not without consequence.

Transforming Athletes: Supporting Educational Achievement Alongside Athletic Pursuits

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Athletes often face educational challenges as they balance their sports careers with academic goals. For many, these challenges stem from inadequate secondary education, disengagement from traditional learning environments, or a strong focus on sport over study. Additionally, some athletes may experience further difficulties related to attention, reading, or processing, such as those associated with ADHD or dyslexia. This research explores the wide-ranging learning challenges athletes encounter and emphasises the need for collective support from sporting bodies, educational institutions, and the coaching team. By recognising these challenges and providing tailored assistance, we can help athletes not only succeed in their sports but also in their academic journeys. This approach fosters personal growth and prepares athletes for life beyond their athletic careers. Educational accomplishment for athletes can be transformative, contributing to a well-rounded identity and opening doors for future opportunities. A mixed-methods survey was conducted by Gualter, van Gorp and Ker (2024), gathering both quantitative and qualitative data from 119 athletes, 78 of whom provided in-depth responses. Learners were enrolled in either Capable NZ's flexible Independent Learning Pathway (ILP) or the taught programme through the Sports Institute, enabling a comprehensive examination of the learning challenges athletes face.

Impact of NZS3910:2023 Changes on Construction Practices

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This study reviews the latest NZS3910:2023 changes and their potential impact on construction practices. Standard conditions of the contract are essential to ensure risk sharing between employer and employee on construction projects. However, there is a provision to include or modify the existing clauses for special conditions of the contract. The government put effort into developing the standard conditions which started from 623P to four versions of NZS3910 in the last decades (1987, 2003, 2013, 2023). The recent version is still premature in its adoption by the industry and there is no review study to explore the potential implications on construction practices. This study follows the review of the content (i.e. clauses within the contract). The changes were identified from the last version and variation is assessed to determine the potential impact on the practices. All the changes in the 2023 versions have some positive impact. The first change is about the dual role of engineers as 'contract administrators' and independent certifiers which may lead to coordination issues to address contractual issues for the employers. Second is the indemnity which has been enhanced with limited liability using a fault-based approach helping more clarification for communication with insurance providers. The third change is about the variation which has been extended with contract price adjustments having clarification around monetary sum inclusion underpayment claims. Lastly, the parties are open to opt for any dispute resolution method if the negotiation is not successful. This will help to save time and cost in attaining resolution through multiple methods. Apart from the conceptual changes several rewordings has been done in the 2023 version. However, no effort has been made towards plain English. This study helps the stakeholders understand the changes and impact of a new version of NZS3910. In the next stage, the practitioners using this version will be interviewed to investigate comprehension.

Place and Time: A Journey of Transformation, Growth, and Pātiki

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“Ko au te Pātiki, Ko te Pātiki ko au”.

“I am the Flounder; the Flounder is me”.

In this presentation, I explore place and time as the framework for doctoral research. My wider project aims to develop whanaungatanga-based professional practice as rongoā in the service of hapū and iwi regeneration. My work is embedded in place - of hapū and iwi of Wairoa where I work in education and cultural identity for community development, in the multiple scales of colonisation, community erosion, life-changing disaster, and timeless moments of reflection and recovery. Indigenous Autoethnography forms the basis for my research as a Māori and Cook Island researcher. My Kaupapa Maori Research approach employs principles of Aroha ki te tangata (respecting people), Kanohi kitea (face to face/in the field), Titiro, Whakarongo, Kōrero (look listen, speak), Kia Tūpato (being cautious), Kia Ngakau Pono, Kia Mākohakoka, Kia Manawanui (integrity, open-minded, commitment) to ensure Mā te Māori (the benefits for Māori). This presentation describes my search for an Indigenous Autoethnographic framework to reflect my place and time. In this presentation, I focus on using place and time as the whakapapa for understanding relationships in an exploration of self-awareness that is purposefully and necessarily insider, messy, reflexive, and in place and of place, and in time and of time. I began my study with a planned community development process. But then my house and belongings were destroyed in the cyclone, followed by repeated trauma and dislocations. The original goal of hapū, whānau and community development remains, but now it is through the lens of ongoing disruption, intensifying practice. My life is intertwined in the moments of surviving and doing. These moments build resiliency and foster regeneration. The same drivers are there, but now everything is amplified as time and place dance with on-going turbulence. Place and time both have Indigenous and Western constructions and meanings that weave through this story.

Hiapo Framework - Weaving Professional Identity in IT

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Professional identity is an important aspect of professional work. It affects not just how you see yourself and your colleagues within your profession, but also how you relate to others in your workplace and beyond. A common understanding of the nature of the profession's framework of practice provides a shared basis for working together. Unfortunately, such a common understanding has eluded the fields grouped as computing (including Information Technology, Developer, Operations and so on). Many studies have shown that the computing professional framework of practice is poorly understood. This can lead to misunderstandings and conflicts within organisations and leaves open many questions for both the professional and the organisation. In many instances, tension arises because the business and the IT department are simply talking past each other. In this presentation, we present Hiapo - a novel approach to mapping roles and responsibilities regarding the operations of a business and computing within that. Hiapo weaves Porter's (1985) Value-chain model of a business with categories from Skills for the Information Age (SFIA). These form one dimension of a grid, the other is level, represented by both business (Governance, Strategic, Tactical and Operational) and responsibility and accountability levels from SFIA. This forms a grid upon which functions of an organisation can be mapped as a process or system map (borrowing an approach from Maher's (2022) MetaMap). Layered over this system map are the drivers of change which position processes in terms of the level of formality. This scale runs from Structural and Systematic, through Institutional, Symbolic, Ideological, Interpersonal, Internalised, and Embodied and Psychological. We present the use of Hiapo to describe the computing functions within a major New Zealand business. The model provides for representations on the same page of the business function and its related computing processes. We highlight areas where these parts of the supposedly integrated system struggle to align - where, for example, what seems like an operational detail from a business perspective requires the highest strategic thinking for computing. Conversely, there are examples of what might seem like a major strategic move for the business that is perceived by the IT team as entirely business as usual. We show how the use of Hiapo can be used to overcome misunderstanding. Missing from the model is the external environment such as cultural factors. These will be the focus of future research. This work will be useful to anyone interested in mapping professional relationships.

Stepping Through the Portal: Envisioning a Collaboratively Holistic Integrated Project for Tomorrow

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Many work situations require some form of collaboration, whether in performing tasks or in learning new tasks. Information needs to be synthesised from different contexts, problems solved, and opportunities seized. Conventional discrete subject-based learning with a capstone project at the end of a qualification journey typically offers more opportunities for ākonga to learn the theory of collaborative work than to practice its reality. The aim of the study was to design, without being limited by current systemic constraints and internal restraints, a Collaborative, Holistically Integrated Projects learning model that is ākonga-centric in its operation and addresses key employer requirements of new graduates. The design was developed using an iterative testing methodology. It was first constructed from reflections on lived experience as both ākonga and kaiako. Subsequent iterations tested and further developed the model. Our results demonstrated that the Collaborative Holistically Integrated Projects model (CHIPS) model establishes a scalable framework for taking all the parts of a qualification and integrating learning into an integrated collaborative project. The CHIPS model is validated through the development of a framework of practice, and a fully articulated delivery model. Further iterations developed and tested the CHIPS model through a series of interrogative lenses and industry feedback. A guidebook, written in a narrative style, communicates the model to educators. Vocational learning is currently in a state of flux. This state presents us with an opportunity to envision a model of project-based learning without having to be bound by the traditions of yesterday and today. If we are to make the claim that the learning experiences that we facilitate are centred around good learning practices and employer expectations, stepping through the visioning portal and co-creating the future is an opportunity we have an obligation to accept now.

Belonging as a Protective Factor

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This research aimed to measure the effectiveness of a positive psychology intervention, the well-being of ākongā and students' sense of school belonging. The Assessing Wellbeing in Education (AWE) tool was used. A large sample of students (n = 589) completed data sets for this study. The Men Fit Programme was developed, based on other positive psychology and growth mind-set interventions, and implemented in an all-boys high school in a small city in Aotearoa New Zealand. The Men Fit Programme was a 20-hour intervention, delivered two hours a week over one school term. A small group of participants completed the intervention (N=69) between 2017-2019. The AWE measured school belonging, stress, anxiety, and depression. School belonging predicted lower odds of both depression and stress, but not anxiety. Our results demonstrate the importance of school belonging and indicate that there is scope for more research in this field moving forward, with a sense of school belonging clearly something worth fostering and growing in Aotearoa New Zealand. A sense of belonging can be fostered by kaimahi and ākongā.

Wairua | The Beautiful Weaver: Incorporating Wairua into Tertiary Education

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Within Aotearoa New Zealand there is an increasing discussion on the importance of including spirituality in education. Spirituality may be relatively new to the education world, but within te ao Māori it is deeply embedded in historical knowledge. The term which best captures and understands this essential element is wairua. Wairua is recognised as fundamental within the lived reality of Māori. The aim of this research is to explore how educators can incorporate wairua into tertiary education and what outcomes result. A co-research partnership was developed between takata Tiriti and takata whenua, using action research methodology and whakawhiti kōrero as a data collection method. Data was then analysed using the Qualitative Analysis Guide of Leuven (QUAGOL). Five hui were held with six participants. Participants engaged in a whakawhiti kōrero process discussing their developing understanding of wairua and deciding on weekly actions to add, remove, modify, or notice within the classroom. These actions were then incorporated by the researchers and reflected on in the following hui. Through the research process participants demonstrated a deepening understanding and recognition of wairua within tertiary education and their own lives. Findings indicate a need to incorporate wairua into tertiary education to enhance a culturally responsive education space. Recommendations began with the call for all tertiary educators to embrace their own wairua; inclusion of te reo Māori, tikaka, mātauraka Māori and a focus on whakawhanaukataka; regular opportunities for tauira to connect inside and outside the classroom; honouring of time and space; and an awareness of how wairua can be hurt and subsequently healed. It is hoped these recommendations will guide the embracing and weaving of wairua into all tertiary education spaces.

It's About Time for Sustainability

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Time and sustainability are inherently entwined. At a base level, sustainability implies the ability for something to be sustained over time. At a conceptual level, time and sustainability have been theorised through notions such as futurity, and inter-generational justice. However, sustainability is not only framed by the future as it also draws on legacies from the past to guide our way forward, thinking that is inherent in most indigenous cultures. This research goes beyond such links between time and sustainability to critically engage with the ways that late-modern consumer culture and sociocultural conceptions of time influence peoples' ability or capacity to practice sustainability. In this sense, the practice of sustainability could be characterised as caring and acting for the well-being of self, others, and our planet. Scholars have argued for more than 30 years that dominant time-related societal structures, i.e. the 'busy-ness' of modern life, have resulted in 'time-squeeze' and, therefore, growing (un)sustainability and well-being issues. Compounded by rapid technological advancement and acceleration of the pace of life, time-squeeze has come to symbolise the reality of everyday lives and, in the process, contribute to unsustainable and often unhealthy consumption patterns. This research presentation/conversation begins an exploration into ways in which diverse social and cultural perceptions of time can disrupt time-squeeze and point to new ways of practising sustainability. Based on an amended existing project, the multi-cultural and multidisciplinary research group will utilise a collaborative autoethnography approach to explore their experiences and perspectives of time and sustainability. This presentation/conversation represents a preparatory phase in the research where the team reflexively discuss their subjective positions as they relate to time and the practice of sustainability.

Is This a Photograph?

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Photography has historically been viewed as a simple two-dimensional representation of reality. In reality, through a long creative development, it has evolved into a versatile tool, increasingly intersecting with hybrid multimedia practices. As a photographic educator and artist, I am interested in imagery that interacts with physical space and light. I am presently expanding my practice through enrolment in an MFA at the University of Canterbury. As a means of exploring the materiality of the medium, my current investigations include bending, twisting and scratching into photographs printed on contemporary building materials like Aluminium Composite Material (ACM). The resultant forms are then arranged and combined with other materials creating fresh narratives. To enhance spatial interplay in the photo-sculptures I am developing kinetic elements in the exhibition presentation of these works. My work is progressing in response to contemporary artists such as Aldo Tolino and Marian Tubbs, who challenge categorisations of practice and blur traditional boundaries between media. Ultimately, this work aims to question the classification and compartmentalisation of photographic art in both practice and education.

365 Days Looking Down

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In order to develop my creative practice while teaching photography, I challenged myself to post one photograph a day on Instagram. The Instagram app was chosen purposefully because of its immediacy. Using my phone allowed me to capture, edit, and share images quickly, overcoming time constraints. Had I been photographing for personal practice alone, without engagement in social media, I may not have followed such a deliberate and disciplined process. This also connected me to other creatives, and unexpectedly led to an article about my work in Art New Zealand. As I moved through the project, my perspective shifted. I became more engaged with transient scenes reflected in rainwater. Christchurch is expected to have a 10% increase in rainfall due to climate change, offering me more opportunities to explore these scenes. My photography is not capturing the impact of climate change in a brutal, impactful narrative, it is a far more subtle approach. I capture both human-altered landscapes and natural forms. Trees appear in many of the images, highlighting their vital role in addressing climate change, while other images feature human-made structures, reflecting the environmental costs of urban growth. I showcase water as a threatened resource through my creative practice and raise awareness around one effect of climate change, the impact increased rainfall has on water quality. Increased rainfall can wash harmful pathogens into waterways, raising the risk of waterborne diseases in drinking and recreational water. I use the cyanotype process, creating prints with rainwater I collect from runoff. Washing the prints in collected water, rather than tap water, highlights the value of water as a resource. This allows the environment into the image making process. The narrative underpinning this work is water security, taking this concept further than capturing transient images glimpsed in puddles.

AI for Higher Education – Trends, Future, Challenges and Opportunities

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The impact of Artificial intelligence (AI) is complex and requires a thorough evaluation that considers a wide range of research. Learners and academicians have started realising the challenges, risks, and benefits of using AI in higher education (HE). This study focuses on exploring the trends, challenges, and opportunities associated with the use of AI in higher education through a systematic literature review. The relevant publications were accessed from EBSCO and Web of Science with search strings, “Artificial intelligence” OR “AI” OR “LLM” OR “Language learning model” OR “GenAI” AND “higher education” OR “college” OR “adult education” OR “online education” OR “distance education” OR “University” OR “Tertiary education”. Out of 7367 initially identified publications for the period between 2014 and 2024, 246 articles were included for final synthesis, according to explicit inclusion and exclusion criteria. The reporting is guided by the PRISMA guidelines for increased transparency. The investigation focuses on: 1. What are the current AI technologies being integrated into higher education? 2. What are the anticipated future trends in the use of AI for HE? 3. What challenges and opportunities might arise from these trends? Initial findings show the use of several AI technologies, such as machine learning, deep learning, natural language processing, intelligent tutoring systems, predictive modelling, and intelligent analytics, are being integrated into higher education to enhance personalized learning, reduce administrative workload, automated grading and feedback, and provide greater accessibility. Future trends indicate the increased use of AI for high-precision education, advanced learner tracking, collaborative learning environments, and the development of more sophisticated AI-driven educational tools and platforms. At the same time, this study highlights the challenges such as addressing ethical concerns, data privacy issues, and the digital divide. Finally, opportunities highlight AI's potential to improve educational outcomes, personalise student support, and reduce administrative workloads.

Organisational Cynicism and Turnover Intention: Moderating Role of Employee Engagement and Organisational Support

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Organisational cynicism (OC) is a growing trend in contemporary organisations. However, its effect on employee turnover intention (ETI) remains understudied. It is imperative to understand work dynamics for organisational efficiency in the healthcare industry, already suffering from severe staff shortage in several countries. This study aims to examine the moderating role of employee engagement and organisational support on the relationship between OC and ETI. Primary data will be collected through a five-point Likert scale survey questionnaire from employees of health organisations in Aotearoa New Zealand, employing a convenient sampling technique. The questionnaire will be adapted from existing studies and pilot testing will be conducted ensuring its reliability and validity. Structural equation modelling (SEM) will be employed to analyse the data. This study will help understand effects on the behaviour and attitude of employees, supervisors, and representatives on the one hand and organisations on the other. These effects may have specific susceptibilities due to the vicinity of the employees. Existing studies found negative effects of OC on employees. Therefore, this study explores the moderating effect of employee engagement and organisational support on the association between OC and ETI. The findings of this study will help supervisors inhibit the harmful effect of OC by reducing the level of psychological contract violation and organisational politics reducing cynicism among employees and improving performance. Leaders need to communicate honestly, effectively, and frequently to address cynicism to ensure staffing and resource levels that result in good patient care and positive work attitudes at hospitals. In addition, this study will help psychologists to understand employees' attitudes and improve personnel selection ensuring they recruit the right people. Only a few studies investigated the relationship between OC and ETI. Therefore, this study will add value to the existing literature on organisational cynicism.

Te Puna Wānaka: A Living Lab of Architectural Intelligence

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The concept of cultural continuity in architecture emphasizes the preservation and adaptation of cultural values, practices, and symbols within the built environment. In Aotearoa, this principle is observed in contemporary interpretations of traditional architectural forms and materials, ensuring continuity of cultural identities enriching contemporary architecture. This approach aligns with Rapoport's theory of environmental perception, emphasising the importance of cultural symbolism in shaping meaningful and identifiable spaces. It also endorses Christopher Alexander's Pattern Language, which emphasises creating spaces that emotionally and functionally respond and resonate with users, contributing to the emotional and functional quality of architecture. The proposed case study of Te Puna Wānaka (TPW) delves into the project's incorporation of Te Ao Māori to create spaces that are not only physically effective but also embedded with cultural and spiritual depth. TPW exemplifies how traditional knowledge can inform and shape contemporary architectural practice. This research investigates the impact of TPW on Aotearoa's contemporary thought process, highlighting its role in shaping responsible and culturally sensitive design methodologies. It also emphasizes the importance of preserving Indigenous values while adapting them for future applications, and successfully integrating these values in architectural interpretations. The proposed study will address key questions centred on cultural continuity, examining how TPW maintains and adapts cultural values, Existential Depth and Experiential Richness, assessing the project's spiritual and emotional impact, investigating cultural sustainability and Spatial Intelligence, analysing how TPW contributes to long-term, intelligent design solutions that respect cultural traditions. The proposed research shall employ Sense of Place and Belonging Surveys, such as the Place Attachment Inventory and Place Identity Scale, to evaluate how architectural space fosters identity, connection, and emotional ties among users and visitors. The outcome of this proposed research will form the basis for developing a framework for architectural education with TPW as a repository of Architectural Intelligence.

Nutri-Islands: Video Game for Nutrition Education

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Educational strategies aimed at modifying dietary and physical activity behaviours are frequently used to prevent and manage childhood obesity. However, inconsistent effects have been reported, with adherence to guidelines often being poor. Hence, the researchers aim to develop an engaging and educational game to increase children's nutrition literacy. Nutri-islands is a New Zealand developed nutrition education video game designed as a 2D top-down Role-Playing Game for children ages 7 to 11 years old, which allows players to explore the islands and discover food items, play mini games, and bring about a healthier future. Evidence-based nutrition information is incorporated into the game through mini-games, mini-videos, mini-quizzes, and an interactive encyclopaedia. Using an interdisciplinary team approach and participatory design, we have integrated and applied theories and models (such as the social-ecological model framework) from design and development, health communication, gaming, and behavioural science to guide the development of a serious game (Nutri-islands). The game design approach has been previously published in 2021. The characters of the game are fictional, "Otepians", kiwi (bird)-like human characters. There are six levels of the game, with each level being a different island and theme, where players learn about different nutrients. Nutri-islands is web-based game and can be played on any computer with the mouse/mousepad as controls, from "nutriblocks.co.nz". Nutri-islands was developed through funding from the New Zealand Centre of Digital Excellence, through the company Nutriblocks (no longer in existence). Future research is being carried out through collaborations with a PhD student at UC to determine the effectiveness of the video game for increasing nutrition literacy and looking at the use of an AI companion in the game to increase parent-child engagement.

Project Based Learning in Action: The 'Waka Whetū' Matariki Exhibition

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Project-Based Learning (PBL) is an effective educational strategy that enhances academic performance and deepens understanding through hands-on, real-world experiences (Thomas, 2000). This study examines a collaborative initiative within the Communication Design programme at Otago Polytechnic, where third-year students partnered with Tūhura Otago Museum to develop the interactive exhibition "Waka Whetū," highlighting the cultural significance of Matariki, the Māori New Year. The exhibition aimed to educate visitors about Matariki and assist them in identifying the star cluster through various media, interactive features, and films. By adopting a whakapapa-centred approach, it embedded Māori ancestral connections into its storytelling, ensuring that each star's narrative reflected its role in Māori cosmology. Although PBL is typically introduced in the later stages of a degree programme, the teaching team utilised this project to assess quality and sought guidance on engaging with culturally sensitive project briefs. The High-Quality PBL framework was employed to evaluate effectiveness, incorporating key elements such as intellectual challenge, authenticity, reflection, collaboration, and the creation of a public product, enabling students to showcase their work to the community (Holm, 2011). Additionally, the project adhered to Culture-Centred Design principles, ensuring it was Indigenous-led and grounded in Māori knowledge. Students collaborated closely with Māori astronomer Victoria Campbell, Curator Dr. Gerard O'Regan and Te Punaka Ōwheo at the Otago Polytechnic, promoting authenticity and respect for Māori narratives. The IDIA (Indigenous Design and Innovation Aotearoa) Toolkit was utilised to assess cultural integrity, emphasising connection, understanding, respect, and reciprocity. Overall, "Waka Whetū" exemplifies how High-Quality PBL and Culture-Centred Design principles enrich student learning, foster cultural appreciation, and prepare students for meaningful contributions to their communities. The presentation will discuss how we utilised both toolkits to assess the effectiveness of design teaching and how they can serve as a benchmark for future design projects.

Girl and the Imagination Warehouse: The Exploration of Adult Issues through the Lens of Children's Media

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As a practitioner of traditional and digital arts, I use children's entertainment forms to explore adult issues like anger management and conflict resolution. This presentation interrogates findings from "Girl and the Imagination Warehouse" (GIW), a transmedia project that I have been developing over the last 15 years. The current iteration of GIW combines traditional stop motion puppets with cutting edge virtual production techniques such as the "Volume" LED wall. The premise of this story is that Girl is a good kid, but when things get to be "too much", she retreats into the Imagination Warehouse where her six imaginary friends help her find the right, fair, and sustainable response to the big questions of her life. These imaginary friends include a binge-eating possum, jokester cyber rabbit, and 2 meter-high armadillo. Girl and her friends interact in a giant warehouse that serves as a metaphor for the mindscape; each imaginary friend has their own "cul-de-sac" where their emotional worldview and way of problem-solving and is explored. My presentation at the creative arts showcase will include a review of the visual iterations that the project has gone through up to this point, current photographs and short animations, and a short talk that explores and analyses traditional and digital creative arts practices. In addition to being an artistic outlet, I use this project in my teaching practice in three ways: first, as a way of testing the dynamic pipeline between traditional and digital screen arts practice, second, as a method of creating teaching materials for Hybrid Flexible students (those who choose to attend in person, synchronously, or asynchronously), and third, as a real-time demonstration of passion for a project and understanding of what a learner might be experiencing as they try out new methodologies to bring their own stories into being.

From Concept to Completion: Collaborative Combining of Animation Mediums and Skills

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We aim to show that participating in creative project-making events offers valuable hands-on experience for students, graduates, and tutors. In 2024, we organised and hosted two major weekends dedicated to making screen arts projects at Te Rau o Te Huia: the Global Game Jam, and VF48hours Film Competition. This presentation will reflect on our organising journey using Kolb's learning cycle and showcase our completed projects - a 2D top-down game titled Quack Up, and a 2D animated short film called Targeted. We will overview a brief history of these events and breakdown the 48-hour pipeline for each project, from concept to completion. Through these events, new collaborative relationships were made, challenges were faced, and learning was shared with our students back in the classroom. It is significant to participate in these events to gain insight into role, story, and medium preferences, test out collaborations, and fuel creativity afterwards. Making and publishing creative practice-based projects proves that we continue to contribute to the screen arts industry in New Zealand.

Global Game Jam 2024 Quack Up link: <https://globalgamejam.org/games/2024/quack-4VF48hours>

Screening Room 2024 Targeted link: <https://www.48hours.co.nz/screening-room/2024/dunedin/targeted/>

Thinking With Care Through Collaborative Creative Practice

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This presentation shares the collaborative creative practice of an artist and a home sewer exploring the concept of 'thinking with care'. The collaboration engages with Haraway's (2019) 'thinking with' as a relational way of being and learning with the world. de La Bellacasa (2019) expands this, positioning care as both ambivalent and necessary, and suggests we 'think with care' through asking 'what is care here?'. Thus, challenging authors to continually question 'What is care here' in their collaborative practice. Latta's (2002, 2013) aesthetic play is employed as methodology. Aesthetic play involves trying things out, with felt freedom and curiosity to encourage a movement of thinking (sense making). Within this framework the project brings together learning with place (drawing) and reuseable making processes (sewing), to 'think with care'. Thinking with care relationally across all aspects of the project required demands of the authors, and insight, that they could not do this alone. Exploratory artefacts were generated through shared decision making. A dress and bag employ processes that rework and revalue time and labour, reinforcing relational and ethical practices, while care labels became central to communicating interconnectedness of human, material, and ecological concerns. Aesthetic play's felt freedom guided explorations, allowing space and time to learn, supportive relationships, courage and nourishment. Play became a guide for how to care for place, other and self. Complex conversations asking, 'What is care here?', could be weighty and collaboration assisted deeper learning, asking what happens when one is unable to think with care? Attunement to process involved listening, sharing and being comfortable in a reflective 'fog', allowing learning to emerge. Thinking with care collaboratively, proposes a shift in perspective that values relational and ethical decision making, and may be of interest as a critical process of learning together that has potential for working through complex problems.

Manaakitaka Reka

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"Manaakitaka Reka" was a collaborative kai experience, created and hosted by the Food Design Institute at Otago Polytechnic as part of the 2024 Feast Matariki celebrations, held by Eat NZ across Aotearoa New Zealand. Adrian Woodhouse, Chloe Humphreys, and Tim Lynch from Otago Polytechnic were commissioned by Ministry of Business, Innovation & Employment and Eat NZ as creative directors to produce a public food event in Ōtepoti that brought to realisation the kaupapa, "how Indigenous thinking might contribute to a more equitable food system for everyone." The project required the research team to bring together members of Ōtakou manu whenua and ākonga from the Bachelor of Culinary Arts, Bachelor of Design (Product), and Bachelor of Design (Communication) to plan and execute this concept as a public food experience. The team used an experiential design methodology to create an immersive culinary journey through Aotearoa's food systems – past, present, and future – which examined the important role of Indigenous knowledge in shaping a more sustainable and inclusive food future. This presentation will showcase "Manaakitaka Reka" and the creative process behind it, detailing how the event brought to life the thematic progression of Aotearoa's food systems.

Link to video: <https://youtu.be/QOI371S-4xw>

The Role of Visual Within Professional Practice Inquiry

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The aim of this presentation is to explore the nuanced ways visual can be put to use throughout Professional Practice research journeys, as thinking and learning, and as tool for analysis, reflective insights, and communicative- shaping, framing and articulating professional practice projects. We present a 30-minute performance where we share excerpts of practice in a performative way. We demonstrate a creative process in use in inquiry that foregrounds visual processes to further understanding. The context will be that of exploring regenerative modes of thinking through visuals. We have previously published papers that integrate diagrams of sustainability and creative artwork. We see this presentation as lifting the lid on our inquiry process. The performance will be a mixture of conversation and visual practice at play in drafting our next paper on regenerative transformation. We invite audience participation. We find visual practices within professional practice research useful across dimensions of inquiry as provisional thinking, as ways of holding and working with complexities of practice, contexts and theory. We share experiences of visual as reflective thinking, and as collaborative space able to cut across ground. We find the role of visual within an inquiry should be considered with care, where critical creative thinking is at work, making demands of the audience to relinquish how they come to know, for instance being willing to not privilege words, nor relinquish the visual to representation. We think this will be useful for people interested in the role of visual in both the process of inquiry and communication. We hope that the performative approach is fun and demonstrates the ease and benefits of creativity in the research process.

Visual Literacy and Transformative Learning

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This poster presents the outcomes of a nationwide visual literacy (VL) in learning and teaching survey conducted from in late 2023 with ethics approval. The study aimed to assess perceptions of confidence of lecturers (kaiako) in VL skills including:

- Selecting and creating images to enhance learning.
- Designing visually led activities and assessments.
- Using visual tools for problem-solving, conceptualising and collaboration.
- Applying visual design principles to organise content and improve accessibility.
- Critically recognising ethical and legal issues in using visual media.
- Using visual literacy to support other capabilities such as numeracy and language literacy.

The study objective was to identify gaps and inform VL professional development opportunities. Based on both qualitative and quantitative survey insights, we propose targeted interventions, including integrating VL into academic culture and policy, while providing professional development opportunities on visual pedagogy. These recommendations aim to improve content accessibility and ākonga engagement, hence enhancing learning. Our poster will detail the survey methodology, key findings, and practical steps for implementation.

The Impact of the COVID-19 Pandemic on New Zealand Listed Companies' Dividend Policy

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Dividends motivate investors to allocate funds to the stock market, serving as financial rewards distributed from company profits. The COVID-19 pandemic posed significant challenges to the global economy, impacting the financial performance and dividend policies of companies worldwide. In New Zealand, over 80% of adults invest in the stock market, either directly through the New Zealand Exchange (NZX) or via KiwiSaver accounts, making the stability and performance of these investments crucial for the financial well-being of a significant portion of the population. This paper analyses changes in dividend payout ratios during the COVID-19 pandemic in New Zealand. Employing a quantitative research design, secondary data were sourced from Refinitiv and verified against annual reports. Inferential and descriptive analysis methods, including ANOVA, t-test, correlation, and regression, were used to examine financial data from 116 publicly listed New Zealand companies between 2017 and 2023. Major financial parameters and their changes due to the COVID-19 pandemic were analysed. Our findings indicate that New Zealand's stock market exhibited low volatility during the pandemic, with some companies maintaining consistent dividend payouts. Specifically, thirty-three companies kept their dividends unchanged, approximately fifty increased their dividends, and around thirty reduced theirs. This research provides critical insights for investors seeking to preserve the value of their investments by identifying companies that maintain their value during crises. Companies do not behave uniformly in such periods; notably, some offered higher dividends and enhanced shareholder value during the pandemic. Interestingly, companies prioritizing gender diversity are recognized as value creators. Moreover, listed companies based solely in New Zealand tend to pay higher dividends compared to those with international operations. This study provides insights into the factors that inform investment decisions, particularly for investors seeking strong dividend yields.

A Short Overview on Perception and Characterisation of Sound in the Learning Space

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Sounds can stimulate the construction and processing of mental sound images that are generated as a means to perceive and characterise the imaginary soundscape of the learning space. Directly linked to the evaluation of learning experiences involving sound, research tools focusing on sound perception and processing such as Auditory Scene Analysis and Embodied Sonic Imagination, can extract useful information from the building architecture and the occupants. Studies show that periodic student and teacher self-report ratings of perceived (spatial) loudness, for instance, could effectively inform the design of acoustically healthier and more sustainable educational buildings that perform better under the demanding acoustic conditions and requirements of commonly utilised large open plan learning spaces, for example. Various studies have measured sound pressure levels, as well as building performance, and when addressing performance monitoring and reporting of institutional buildings, for example, mainly, studies have implemented a more Post-Occupancy Evaluation approach when examining the indoor acoustic quality of university classroom environments, for instance. Nonetheless, despite the growing need for higher educational institutions to thoroughly acknowledge and understand the impact of sound in the tertiary teaching and learning experience, overall, empirical qualitative measurements and evaluations of the effects of sounds in the learning space are lacking. This short literature review summarises the current literature on this topic, adopting a scoping method to examine the various research design approaches, methods and investigative procedures. Accordingly, it shows how the combined use of quantitative and qualitative indicators can successfully reveal the effects of sound in the tertiary learning space.

Wool Dynamics

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This presentation discusses reflections from our collaborative project-based learning in Product Design at Otago Polytechnic with the Campaign for Wool New Zealand. New Zealand has a history of growing high-quality coarse wool; however, the increased use of polymer-based fibres has dropped wool exports significantly. Prices paid for wool have dropped to the point where it is unsustainable. 'Wool Dynamics' is a pilot project being run at selected product design and architecture schools across Aotearoa which aims to introduce future designers to wool, help reinvigorate the strong wool industry in NZ and make a positive impact on our planet. In this project, students are tasked to develop new applications for strong wool, under set criteria: the design must use New Zealand strong wool, make use of wools' inherent properties, and use wool in an innovative way. Sustainability and circularity, local and cultural significance, potential scalability, and telling the wool story are important factors. Students follow a Product Design methodology including a research, theoretical and physical phase exploring of wools' inherent physical properties, processing and manufacturing considerations. Need identification research is undertaken through human-centred market research to. Students complete an iterative process of ideation and concept development, material exploration, prototyping and testing to resolve and refine their work, whilst gaining critical feedback from users and CFWNZ stakeholders. In the final phase of work, students develop final prototypes, imagery and text to communicate their outcomes to both their client (CFWNZ) and for exhibition. Preliminary outcomes are diverse and varied. We will discuss the design process and outcomes of student work over the semester and assess what contributions this project has made for the wool industry and what further work could be done to champion this material. We will conclude by reviewing the teaching processes and learnings to improve future iterations of the course.

GC analysis of the fatty acid composition of plant-based milks in Aotearoa

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World-wide, plant-based milk alternatives have been gaining popularity. Long chain polyunsaturated fatty acids (LCPUFAs) present in cow's milk are essential for human health. Additionally, studies have shown that the ratio of 18 carbon n-6/n-3 LCPUFAs, also known as Omega-6/Omega-3, in early life may influence infant body composition. There have been many studies involving gas chromatography (GC) analysis of fatty acids in cow's milk. The objective of this study was to analyse and compare the fatty acid composition of a range of locally available plant-based milk alternatives (soya, oat, almond, coconut, rice) with cow's milk. Sample preparation for GC analysis requires the conversion of any fatty acids present to the more volatile fatty acid methyl esters (FAME). The standard FAME synthesis methods avoid water and use only dried samples and reagents. In this study, direct methylation of fatty acids was successfully carried out using fresh samples of plant-based milk alternatives. Analysis was completed using GC-FID with a 120m BPX-70 column, ID 0.25µm. The poster summarises the methodology and preliminary results of this study. It was found that although the total lipid content in fresh samples is low, LCPUFAs were present in all samples. In the plant-based milk alternatives, these were predominantly the two essential Omega fatty acids, linoleic n-6 and linolenic n-3 as well as the monounsaturated 18C oleic acid. In contrast, the range of fatty acids in cow's milk is a lot more extensive and includes shorter chain fatty acids not detected in plant-based milk alternatives. This study showcases the collaboration of two fields, laboratory science and nutrition and is intended to inform the teaching in both of these fields, as well as providing a basis for further study into the growing variety of plant-based milk alternatives available.

High-Intensity Interval Training: Effects on Aerobic and Anaerobic Performance in Waka Ama

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Sport-science research on Waka Ama is scarce, with knowledge predominantly gained from observation of teams, word of mouth, or experience. Limited data suggests that paddlers with higher aerobic and anaerobic power can perform faster 1000m time-trials. Whilst King et al. (2019) have shown that 500m time-trials strongly correlate with absolute VO₂max, however, this data is from younger athletes. The aim of this intervention was to measure the effect of a HIIT intervention on performance in Masters athletes. Following conversations at a club training venue, 21 athletes volunteered. Each participant had experience and competed in the Masters category (40+ yrs). Pre-intervention testing involved familiarisation on a Waka Ama ergometer (Concept 2 & KaHa Paddle System), followed by a 1000m time-trial, 15min passive rest, then a 30sec maximal power test. Oxygen consumption was measured during the 1000m time-trial and stroke-by-stroke power output was recorded throughout. Land-based HIIT training sessions ran over 8-weeks using bodyweight exercises. All sessions consisted of a 5min warm-up and a 45min HIIT session. Intensity was increased by varying the work-to-rest ratio every 6 sessions. Following the intervention, 16 athletes completed the post-testing measures. Improvements were observed in mean power (14%, $p<0.01$), peak power (11.4%, $p=0.03$), VO₂peak (13.6%, $p<0.01$), and 1000m time-trial (2.26%, $p=0.01$). Very large correlations were found between mean power and 1000m time (-0.78), and mean power and distance covered in the 30sec test (0.88). This study showed that following an 8-week HIIT intervention paddlers significantly improved aerobic and anaerobic performances. In contrast with other findings, this ergometer-based study showed that Masters athletes had a higher correlation between 1000m time-trial and mean power output (-0.78) than compared to VO₂peak (-0.47). Further work is required across a range of participant characteristics to produce consistent guidelines for practitioners in this sport.

The Effect of Swim Cap Surface on Aerodynamic Drag

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In contrast to swimsuit technology, there has been considerably less research on the effect of swim caps on swimming performance. Previous research by the authors found larger swim caps with wrinkles increased drag relative to smaller sized swim caps without wrinkles in wind tunnel experiments. Similarly, other researchers have found a smooth rigid silicone swim cap without seams caused less drag than silicone or Lycra caps with seams in an aquatic environment. Further research by Gatta et al. (2015) found minimal difference between swim caps with a smooth or dimpled surfaces when swimmers were towed with their arms alongside their body. Based on this research, the surface of a swim cap has minimal effect on the drag experience by a swimmer. Nevertheless, at the recent Paris Olympics, elite swimmers such as Olympic champion Léon Marchand were observed to be wearing swim caps with concentric circles at the top of the swim cap. These swim caps appear to be the Arena Aquaforce Wave swim cap, which according to the commercial website <https://www.proswimwear.com/> will improve racing performance due to the highly innovative undulating surface that reduces friction, which allow a swimmer to slide easily through the water. Despite these claims, there is no published research on the effect of a swim cap with an undulating surface on drag. Subsequently, the aim of the proposed study is to determine if an Arena Aquaforce Wave swim cap reduces aerodynamic drag relative to a smooth swimming cap. Drag will be measured in a wind tunnel set to a wind speed of 10 m/s with a Reynolds number similar to swimming at 1.76 m/s in water. Aerodynamic drag will be measured on a model head with no hair in two swim cap conditions: Arena 3D Soft swim cap (smooth surface) and the Arena Aquaforce Wave swim cap (undulating surface). The model head will be fixed in two positions in the swim cap conditions: (i) a horizontal position equivalent to the head position in backstroke and (ii) at a fixed, vertical front facing head position. Our poster will present our findings.

Autonomous Learning Research Community of Practice

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I am interested in holding a meeting with colleagues in all contexts of OPSITARA who are interested in autonomous learning. The meeting will revolve around how we can enhance our understanding of what a curriculum for supporting autonomy looks like, for example, explore questions such as:

- How can we promote an autonomy-supportive curriculum within diverse educational settings?
- What materials and/or resources have been effective in presenting self-directed learning skills across diverse settings/cohorts?
- How can we embed self-directed learning skills in our courses and classrooms?
- What cultural and contextual factors influence the implementation and/or uptake of learner autonomy?
- What professional development can teachers engage in to increase their understanding of an autonomy-supportive curriculum?
- How can you integrate learner autonomy curriculum in your teaching, in class or beyond the classroom?
- Share some practical ideas with the CoP participants - examples of interactive activities would be appreciated.

Applied Business Research Community of Practice

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The Applied Business Research Community of Practice Series provides a platform for staff to network with other researchers across the ITP sector. Applied Business Research Community of Practice is an established group where monthly sessions (online) are organised for the community. This meeting will focus on ongoing research across the sector, sharing research insights, and finding collaborators. We aim to promote the exchange of ideas between School of Business researchers across ITPs and help identify new collaborations and directions for research development. Everyone is welcome!

Emerging and Early Career Researchers Community

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Learn about the new opportunities for emerging and early career researchers within the ITP sector and with support to find external funding, support and mentorship through the Royal Society Te Apārangi. Join Dr Kristie Cameron, chair of the Unitec ECR forum and Co-chair of the Royal Society Te Apārangi ECR committee, to engage with like-minded researchers and contribute as the ITP voice of the next generation of researchers as we navigate a new science system and continue to grow in our expertise for industry-led applied research.